

# AMERICAN AVIATION

February 9, 1959

- McDonnell Rolls Out a Transport
- How to Treat a Sick Airline
- Why the Four-Man Crew for Jets
- Air Travel Plan: What's Ahead?



Airports Steal the Show



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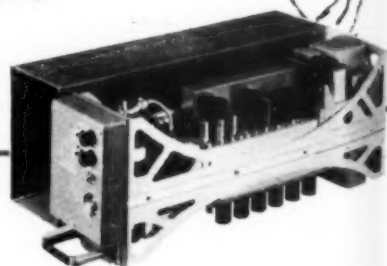
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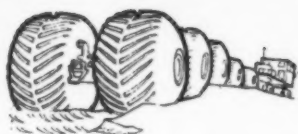
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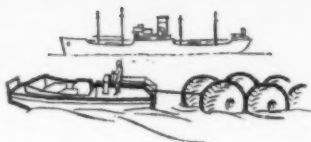


Here — from Goodyear — are ingenious new rubberized containers that offer double dividends: lightweight liquid storage plus unmatched all-weather mobility.



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These big Rolli-Tankers hold 500 gallons each, can be towed in long "fuel trains" over roughest terrain. Tire-like containers roll so easily a man can pull one.



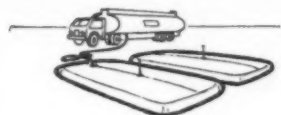
## —OR FLOATS WITH YOU?

Filled with fuel, Rolli-Tankers have natural buoyancy — ride through water, roll right up the beach! Eliminates long-line hoses and pumping.



## —OR COMES BY AIR?

Delivered by air, Rolli-Tankers can be attached to waiting trucks —and rolling—in matter of minutes. Fully loaded tankers survive free falls of 15 feet.



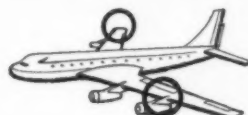
## HOW ABOUT A PORTABLE FUEL FARM?

Called "Pillow Tanks," these tough, rubberized fabric containers can be set up, filled and pumping in 45 minutes. Great where temporary or emergency storage of bulk liquids is needed.



## LOOK! FLOATING FUEL STATION

"Pillow Tanks" in the water serve as "fuel islands"—eliminate stringing of long-line hoses or pumping from remote point. Tanks available in sizes up to 50,000 gallons.



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FOR COMPLETE INFORMATION on these and other new developments in fuel storage and transport, write Goodyear, Aviation Products Division, Akron 16, Ohio, or Los Angeles 54, California.

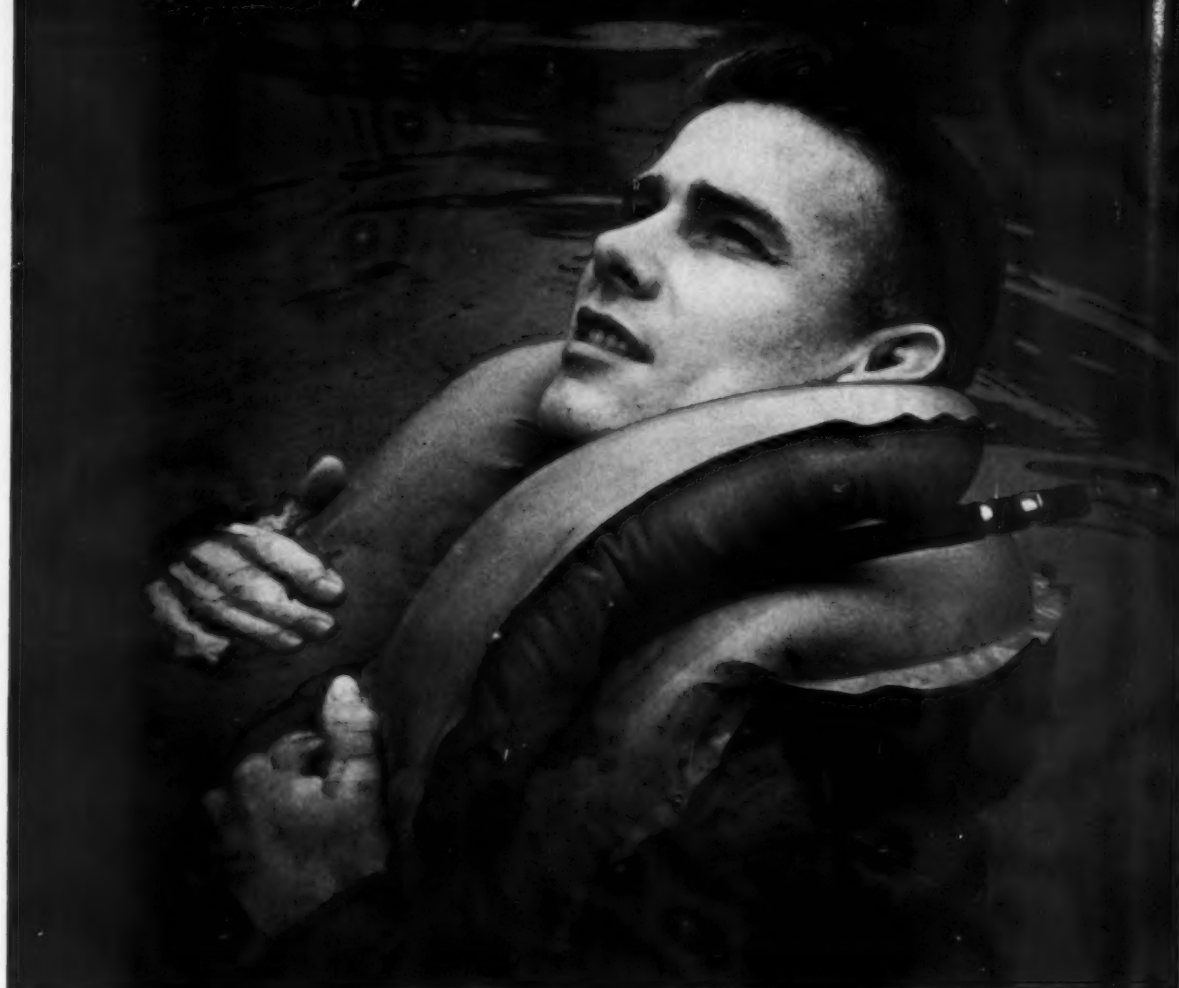
AVIATION PRODUCTS BY

# GOOD YEAR

Rolli-Tanker—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

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another product of Air Cruisers research



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## On the Cover

Pan Am's Boeing 707 Clipper America pauses at one of the few U.S. air terminals capable of meeting the demand for modern, adequate airports and facilities. Pictured is New York's International (Idlewild) Arrivals Building, built at a cost of \$30 million. On Capitol Hill, Sen. A. S. Mike Monroney has stirred up hot support for his bill (S.1), which would have the government assume a more responsible position in providing aid for construction of much needed new air centers. See story, page 17.

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# 6 out of 7 Jet travelers to Europe choose Pan Am Jet Clippers

6½ hours from New York to Europe  
—that's Jet Clipper Magic!

The dramatic impact Jet Clippers\* have made on transatlantic travel is due in part to the fact that these are the world's fastest airliners. Couple this with their amazing comfort and quiet and you have the swift magic that leads 6 out of 7 transatlantic Jet travelers to choose Pan Am.

This is an unequalled story of success... never in the history of aviation has an airliner met with such immediate approval... nor with such good reasons.

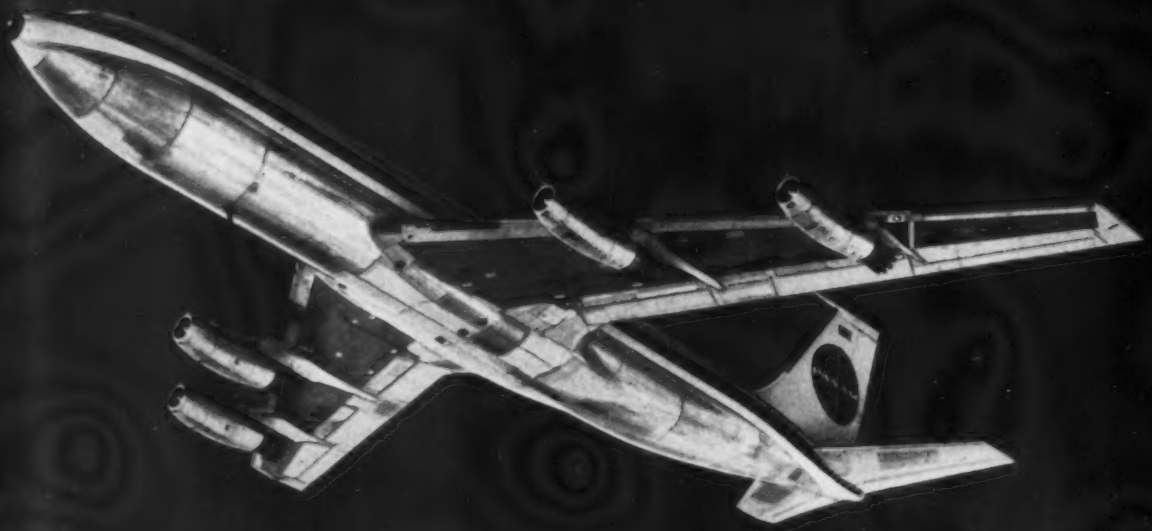
What are the reasons? Speed, convenience and economy. Pan Am Jet Clippers are fastest to London, and the *only* Jets to Paris and Rome. Convenient daytime, and nighttime flights leave daily. And *only* on Pan Am do you get economy class Jet service. There's no extra fare for extra speed! No wonder Pan Am is the Jet leader to Europe.

\*Trade-Mark, Reg. U. S. Pat. Off.



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FIRST ON THE PACIFIC  
FIRST IN LATIN AMERICA  
FIRST 'ROUND THE WORLD



FEBRUARY 9, 1959

...NEWS IS HAPPENING AT NORTHROP



## FIRST LOW-COST SPACE AGE AIRCRAFT DEMONSTRATES NORAIR SYSTEMS MANAGEMENT CAPABILITY

The twin-jet T-38—America's first supersonic trainer—aptly demonstrates Norair's capability in systems management. Now in production under USAF contract, the T-38 Talon is the first member of a Northrop-conceived family of lightweight, low-cost space age aircraft.

Soon to follow: a supersonic counterair fighter, the N-156F—first weapon system designed in America for the specific tactical and economic requirements of those free allied nations most vulnerable to enemy attack.

Other important systems management achievements include the USAF Snark SM-62A and the F-89 Scorpion. Norair management of the Snark program produced the free world's

first operational intercontinental guided missile—delivered on time and at minimum cost.

In producing America's first nuclear-armed interceptor, Norair's weapon system management of the F-89 was marked by on-time delivery of more than 1,000 units throughout the program's life, and by a significant dollar underrun. A full ten years after its first flight, the Scorpion is still the USAF's most heavily armed interceptor—and a uniquely stable platform for air-launch of atomic rockets.

Norair's cost-proved record of effective management, integrated facilities, and available resources combine to demonstrate outstanding capability as a prime systems contractor.

**NORAIR** formerly Northrop Division  
HAWTHORNE, CALIFORNIA  
A DIVISION OF NORTHROP CORPORATION





## USAF Buys the Helio Courier

One of the most promising light airplane developments in the country was the Helio Courier initially developed in Norwood, Mass., by Otto Koppen and Lynn Bollinger. Here was a virtually unique airplane in the short take-off and landing category, a slow but immensely versatile airplane for specialized purposes.

The Courier was a "natural" for Army Aviation, but the Army did a very limited and restricted job of evaluation, probably because it was just beginning to get back in the aviation field. Whatever the reasons, the Army's report tended to discount the manufacturer's claims and word began spreading that the Helio Courier was not all that it was supposed to be.

That was bad enough, but the Army distributed its evaluation report to attaches in foreign countries, and made it available elsewhere too. And before long the Helio market began tumbling. The word-of-mouth damage, especially by Army men who were remote from aviation activities and had never even seen the plane, crippled a private company that had every reason to succeed. It was not a pleasant chapter in Army history.

Thanks to the Air Force, the Helio Courier is back in the running. After truly professional tests by Edwards AFB pilots, the AF discovered that the Helio claims were indeed accurate and justified, and AF has purchased three of the new Super Couriers powered with 295-hp Lycoming engines. It is the first STOL order the AF has ever placed.

It is not often or easy for any military organization to admit mistakes, or to admit injustices. Probably the Army won't do so in this instance, but what it should do is to study the USAF results and take a new look at the Helio product. So interested is the Army in STOL types that some of its people were in Germany looking over types there. The Russians have long been producing good STOL types—and using them. Army Aviation needs only to look in our own country to find a valuable and useful airplane ideally designed for Army needs. We hope it has the honesty and fairness to take a new (and professional) look.

### Still Balking

The Administration hasn't retreated one inch in its efforts to phase out its program of federal matching funds for airports. And it hasn't backed down

one whit in its opposition to providing funds for terminals and hangars.

This became obvious when Senator Mike Monroney pushed forward with hearings on his bill S.1 to provide \$575 million in matching funds over the next five-year period.

There is no doubt whatever that the Senate will vote overwhelmingly in favor of its own bill, and there seems no doubt that the House will follow in like manner. But judging from the Administration position as expounded by FAA Administrator Elwood Quesada, the Congressional action may again be in for Presidential disapproval. This time, however, there will be time for overriding the veto.

Why the Administration is so dead-set in wanting to move the federal government out of airport aid remains a mystery. Airports are an integral part of a national transportation system and a federal aid policy for transportation has existed since the beginning of the country. We fail to see why terminals and hangars should not be included in an aid program since they are not only an integral part of an airport plant but are a capital investment increasing the wealth and earning capacity of the entire enterprise. The five-year sum asked in S.1 is a relatively minor item in the over-all federal expenditures. The Monroney bill should sail through to completion with or without White House blessing.

### Good Film

One of the most effective sales promotion tools is a good film. The National Taxi Conference, whose members are listed in *The Official Airline Guide*, has produced for distribution through its members and the NATC Washington headquarters a very fine 13-minute film in color entitled "Air Taxi U.S.A." We hope it gets wide showing on TV and before civic and other groups. Among other things it dramatizes the close link between the scheduled airlines and the air taxi operators. Like the film "Flying Businessman" produced several years ago by the National Association of State Aviation Officials, the air taxi production is a worthy and effective effort.

Wayne W. Parrish

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to cities served by deluxe DC-7**

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\*being progressively installed



*One of America's Pioneer  
Scheduled Airlines*

*Delta's DC-7 Royal Service Flights  
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**NEW YORK WASHINGTON  
ATLANTA HOUSTON  
CHICAGO MIAMI  
NEW ORLEANS DALLAS  
PHILADELPHIA ST. LOUIS  
BALTIMORE MEMPHIS**

*and now...*

**DETROIT DAYTON  
CINCINNATI**

**First powered flight** of the X-15 research aircraft is now scheduled for April—if all goes well. Captive flights and glide flight tests could start about Feb. 18 if the dry lake at Edwards AFB stays dry.

**Air Force is focusing** current efforts on the F-108, Mach 8 interceptor. Current scheduling indicates that the plane will be ready for production before the Convair F-106 production run is completed.

**Military Services are concentrating** on the development of manufacturing processes which will provide an availability of new materials which will be needed for the B-70, F-108 and latter day aircraft and missiles. AF producibility program is being expanded to meet anticipated demands for beryllium, ceramics, and a long list of new electronic equipment.

**List of Government furnished equipment** for new aircraft and missiles may be extended as a result of current shifts of thinking on weapon system management. New thesis is that long lead-time subsystems such as fire control, guidance, navigation and propulsion equipment should be the subject of separate weapon system management contracts and the airframe or missile frame ultimately developed around standardized components which are fully developed when the need arises.

**New budget form** for the Defense Department which divides the programs by categories into personnel, procurement and production, operations and maintenance, research development, test and evaluation and military construction may ultimately establish a uniform budget for the Defense Department by function rather than service. Present plans go

no further than a study of the possibility of a single budget for research, development, test and evaluation.

**Army is assigned money** in the fiscal 1960 budget for the further development of the aerial jeep and for short take-off and landing aircraft while Navy will spend its aircraft research funds for new antisubmarine and fleet air defense aircraft.

**Current Air Force plans** call for 14 wings of heavy bombers for the Strategic Air Command by the end of fiscal 1960. One of SAC's medium-range B-47 bomber wings will be phased out, however.

**Air Force procurement funds** will be provided in fiscal 1960 for development, test and evaluation of an improved early warning and control aircraft. Competition among the designers for the development contract hasn't been decided yet.

**Air Force fiscal 1960 program** presently calls for obligating \$742,200,000 for ground communications and electronics equipment, including ground installed aids to air navigation at air bases, observation, data processing and display equipment required for weather system. Other items are communications electronics intelligence, communications security and electronic countermeasures equipment.

**Air Force is evaluating** proposals from teams made up of McDonnell Aircraft, Texas Instruments, RCA-Camden; North American-Columbus, North American-Autonetics; and Republic Aviation, Kearfott and Lockheed; for a new integrated navigation system.

**Aircraft windshields and canopies** capable of operating continuously at temperatures of 900 degrees are being developed by Corning Glass Works using glass sheet of optical quality. Glass is to be used in aircraft with stainless steel and similar skin materials. Work is being done under AF contract and will be completed by June 1961.

**Lear equipment** including the L-102 autopilot, LIFE flight reference system and LearCal's radio communications, navigation and direction finding equipment will be used on McDonnell's Model 119 entry in the utility cargo off-the-shelf aircraft in place of competitive equipment originally programmed.

**Raytheon Manufacturing Co.** is looking into the aircraft market for semi-conductors. It is interested in sales for military aircraft as a starting point.

**Chance Vought** will increase its production of the F8U-2N all-weather aircraft for the Navy. Production run to some extent will make up temporarily for the loss of the contract for the F8U-3.

**Fairchild's Engine Division** at Deer Park, L.I. is for sale. Company hopes to find a buyer for the division as a going concern rather than an idle facility. Aim is to keep employment for the time being at a level of 600 with current work and subcontracts which may be obtained.

**New Support Equipment Institute** for aircraft and missiles, under the leadership of I. C. Peterson, former Aircraft Industries Association technical service director, will hold an organization meeting at the Statler Hotel in Washington on March 12. The group will deal with virtually all support equipment except electronic equipment and instruments

where needs are being adequately served by other organizations.

**Boeing will open a New York office** now that deliveries of the 707 are becoming an increasing reality. It is the last of the big airframe manufacturers to feel the necessity for a New York office, since until recently its business was almost entirely military.

**Cast landing gear doors** for the supersonic aircraft of the future are now feasible. One casting will replace 55 aluminum stampings and 1,640 fasteners. Savings are estimated at \$530 per door in aircraft of the size of the B-58 and the B-70. Flight test program is now under way.

**Ryan Vertiplane VTOL has completed** its first conventional flight; Lycoming T53-powered research vehicle will undertake transitions to slow speed and hovering soon.

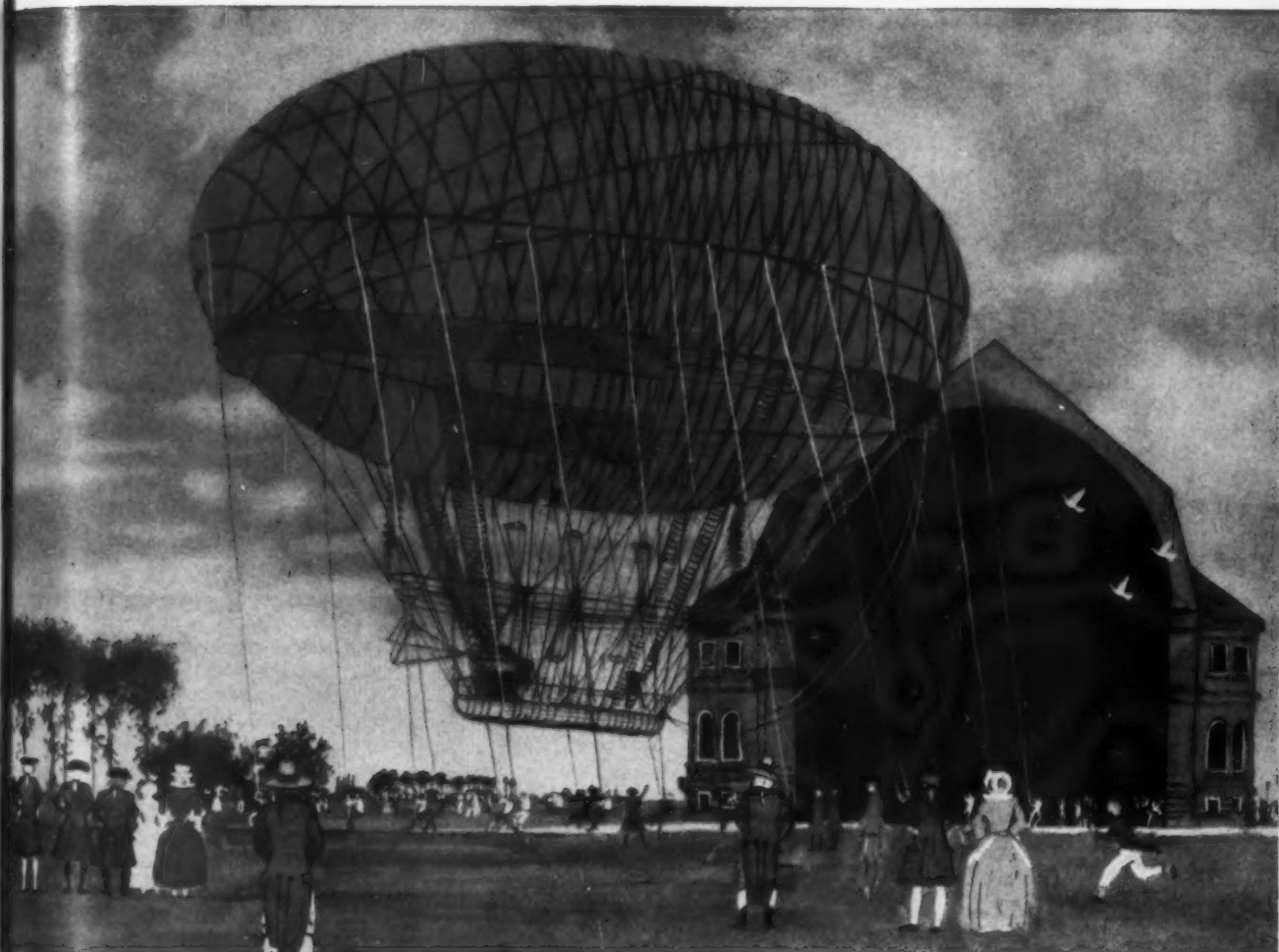
**Supreme Court has denied appeal** of N.Y. lawyer Lee Kriendler for reversal of lower court decision in suits against Beech involving a number of Bonanza accidents attributed to pilot error.

**Sikorsky Aircraft is making its bid** for a role in future non-helicopter VTOL markets. First step: naming of P. L. Michel to post of chief of advanced research to concentrate in these areas.

**General Electric's VTOL powerplant** development may offer a break in vertical-riser design. The idea is a turbojet with diverting valves to send the exhaust into a ducted fan for vertical lift. GE says a transport built on this principle could have a 4,000-lb. payload and 600-n.mi. range with 320-knot speed.



## Propulsion through the ages...



*Propeller-driven airship designed by J. B. M. Meusnier, 1784*

*An astounding proposal* : in 1784, just a year after the invention of the balloon, the Frenchman J. B. M. Meusnier conceived of an airship embodying the essentials of the modern dirigible. Beneath the gas bag hung a gondola control centre. There was a rudimentary rudder and three manually-operated propellers. A proper power plant was lacking, however, and perhaps that is why the dirigible remained a dream for another century. Aero designers of today are more fortunate. They

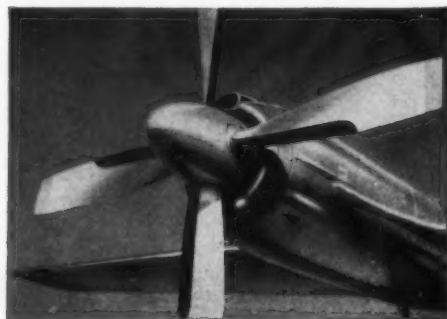
have the proper power plants available, and have fitted propellers to them, creating turbo-jet power packages. The Rotol people, for example, designed, developed and produced the propellers for the first turbo-prop aircraft and now supply over 100 airlines and aircraft operators around the world who attest to Rotol reliability. Rotol turbo-pros are standard equipment on the Vickers Viscount, Fairchild F-27, Grumman Gulfstream and Fairey Rotodyne.

# ROTOL

*The world's most experienced manufacturers of turbo-propellers — over 6,000,000 hours of flying time.*

**Rotol Incorporated after-sales service throughout the United States provides immediate spare parts delivery, technical service on propeller operations and applications.**

*For information on Rotol products and after-sales service, call J. Staples, President, Rotol Incorporated, 409 Jefferson Davis Highway, Arlington 2, Virginia. Phone OTis 4-6290*



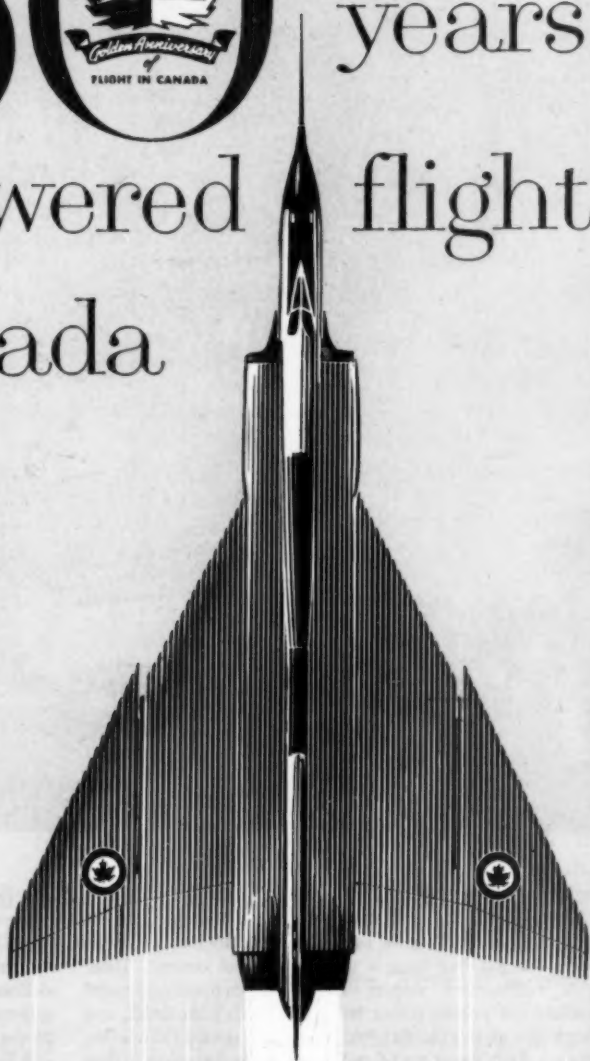
# First 50 years of powered flight in Canada



## 1909-1959

From the DART in 1909 to the Arrow in 1959 a pattern of aeronautical accomplishment has been dramatically recorded in Canada. The past half century of Canada's growth and increasing stature has been greatly accelerated by the swift and vigorous momentum of the men and machines of the Air Age.

Well established in the Jet Age, Canada's aeronautical resources will continue to meet the urgent requirements of a nation on wings.



### **AVRO AIRCRAFT LIMITED**



MEMBER: A.V. ROE CANADA LIMITED & THE HAWKER SIDDELEY GROUP

## CAB's Wealthy Apostles!

It has been a long time since I have had the pleasure of commenting on one of your "personal views." Actually, I enjoy these articles immensely. Having given you a compliment I now propose to dissect your article "How Big is the Air Traffic Market?" appearing in the January 26, 1959 issue of AMERICAN AVIATION.

The fundamental fallacy in your article is that you assume there is bona fide competition among the trunkline carriers, sometimes irreverently referred to as the "twelve apostles," who dominate and control about 93% of the domestic air transportation industry.

As any high school economics student will tell you, there are only two types of competition: (1) quality competition and (2) price competition. Insofar as equipment is concerned, the quality of the service provided by the trunkline carriers is, of course, uniformly excellent. As a matter of fact, such equipment is required by law (the Civil Air Regulations) to be maintained in superior condition at all times.

This leaves the question of price competition. In this connection, if you will examine the records of the Civil Aeronautics Board you will find that since the passage of the Civil Aeronautics Act in 1938 there has never been a case in which the extension of the routes of the "twelve apostles" has ever resulted in any fare savings to the public.

The reasons for the total lack of price competition in the industry are numerous and complex and cannot be adequately covered in this letter. Suffice it to point out that the fundamental reason is the fact that the interline agreements among the trunkline carriers (duly approved by the Civil Aeronautics Board) make the smaller trunklines absolutely dependent upon the larger carriers for a substantial portion of their traffic.

Since there is a complete lack of price competition in the industry, the weary process of extending the routes of the smaller trunkline carriers to "compete" with the larger carriers serves no useful purpose. This is true for the primary reason that the smaller carriers do not tap any new (i.e., low price) travel market. On the contrary, the existing market is simply divided among, say, three carriers rather than two, to the detriment of all airlines involved. A good example of this situation is the extension of Northeast into the Florida market.

The lowly non-skeds have been the

only source of price competition in the domestic airline passenger market. The applications of all such companies to obtain a recognized place in the domestic airline business have always been denied by the Civil Aeronautics Board by a sort of "heads I win and tails you lose" process. In other words, if a non-sked applicant has been operating a route-type service its application for a certificate is denied because it is a law violator. If, on the other hand, it has not been operating a route-type service, then its application is denied because of lack of experience.

Your article states that "out of 175 million people in the U.S., only 12 million flew in 1958." I suggest that this, in itself, is a shocking admission in view of the fact that the trunkline carriers have received at least \$189,533,000 in direct Federal subsidy since 1938 and have been the indirect beneficiaries of untold billions of dollars poured into the development of military aircraft.

I have heard it said that the high fare policy of the big airlines will cause all of them to return to subsidy within the next few years. I disagree. I believe we can all look forward with confidence to the day when the "twelve apostles" will be reduced by mergers to possibly five or six. At that time the airline penetration of the total travel market will be reduced from its present level of about 7% to no more than 2% or 3% and the fare levels will be at least 20% higher than today. In a word, air transportation will be reserved to the very rich and to those who are traveling on an expense account.

I suppose there are a few people in this country who prefer state socialism or a cartel system to our traditional concepts of free enterprise and price competition. I just happen to prefer the American way of doing business.

Coates Lear  
Legal Counsel  
Washington, D.C.

## Too Many U.S. Pilots?

Enjoyed Wayne Parrish's articles on Russian aviation.

By the way, how many Russian pilots do they need to fly their jets? Could it be that two Russian pilots are as good as three American pilots? Also did you get any information on their salaries? Seems that an American jet pilot's pay will be more than "Pete" Quesada's, or the Secretary of Labor's. And the hours are a lot nicer. Things are upside down when the Indians get more than the Chiefs.

Your readers might be interested in answers to the above questions if you have them.

A. F. Merewether  
Bayside, New York

EDITOR'S NOTE: Absolute maximum Aeroflot jet pilot pay in USSR is \$700 a month at current rate of exchange, but not many have reached this figure. On Tu-104A there is a captain, co-pilot, navigator and radio operator. There is also a temporary position for a flight engineer, whom they list as a mechanic, because of unresolved controversy within Aeroflot as to whether a fifth man is needed. Indications are that mechanics will be removed in due time. Radio operators are needed because of lagging communications set-up, CW still being in use to an undetermined degree.

## AMC Agrees

I have read with great interest your article entitled "For the Contract Operators . . . It's Diversify or Disappear" (A/A, Dec. 15, p. 27). It is significant that your article touches upon a subject which we in AMC have "preached" for some time and which was re-emphasized only a month ago to members of TASA (The Aircraft Service Association).

We wish to thank you for the straightforward article which, through the medium of your magazine, will reach many of our contractors whom we may have missed.

W. T. Hudnell, Major General, USAF  
Air Materiel Command, Wright-Patterson Air Force Base, Ohio

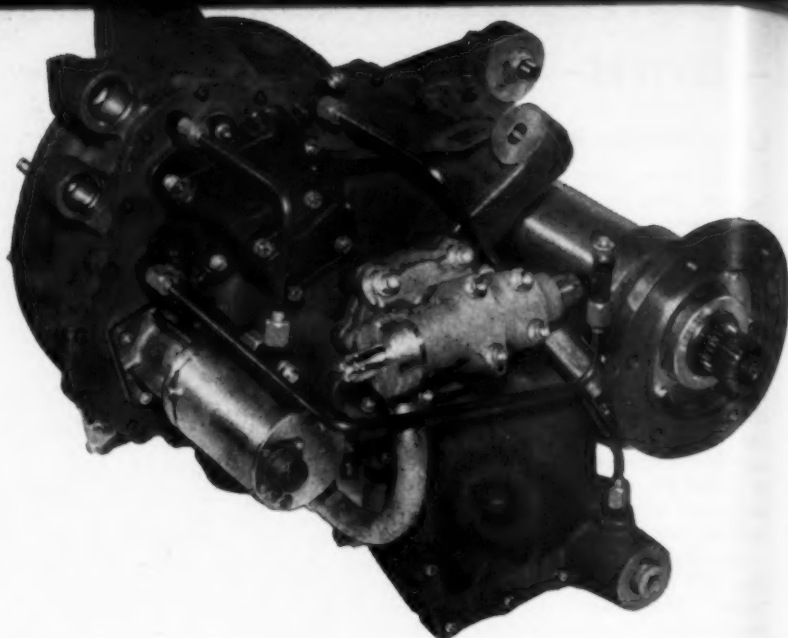
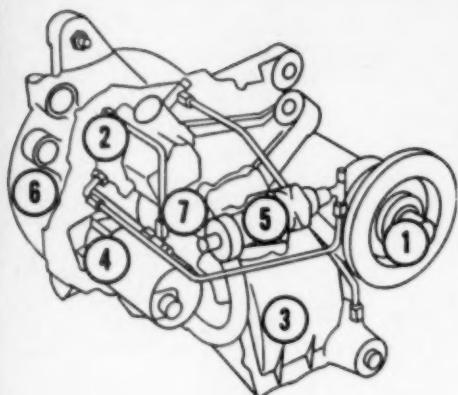
## When & Where

### MARCH

- Mar. 5-6—IAS, flight propulsion meeting (classified), Hotel Carter, Cleveland.
- Mar. 8-11—ASME, engineering meeting on "The Turbine in Action," sponsored by the Gas Turbine Division, General Electric Co., Cincinnati.
- Mar. 12—Support Equipment Institute, Organization Meeting, Washington Statler Hotel, Washington, D.C.
- Mar. 23-26—IRE, National Convention, Coliseum and Waldorf Astoria Hotel, New York, N.Y.
- Mar. 31-Apr. 3—SAE, national aeronautic meeting, aeronautic production forum and aircraft engineering display, New York, N.Y.

### APRIL

- Apr. 12-15—American Association of Airport Executives, annual convention, Savannah, Ga.
- Apr. 12-18—Air Force Association, First World Congress of Flight, combined with annual Jet Age Conference, Las Vegas, Nev.
- Apr. 12-19—Air Line Pilots Association, Annual Safety Forum, Las Vegas, Nev.
- Apr. 26-30—Airport Operators Council, 12th Annual Meeting, Portland, Ore.
- Apr. 27-29—Aero Medical Association, 30th Annual Meeting, Statler Hotel, Los Angeles.



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Accepts varying input speeds from 3800-7000 RPM.

**2 —GOVERNOR**

Maintains  $\pm 0.25\%$  steady state speed over 200° F temp. range,  $\pm 0.5\%$  for 400° F temp. range and 0.5 second maximum full load transient recovery time.

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Senses a predetermined excessive speed to prevent drive overspeeding.

**5 —MAIN SYSTEM RELIEF VALVE**

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**6 —DIFFERENTIAL GEAR SECTION**

Ring, sun and planet gears. Also includes take-off gears for governors, scavenge and make-up pumps.

**7 —FIXED DISPLACEMENT MOTOR/PUMP**

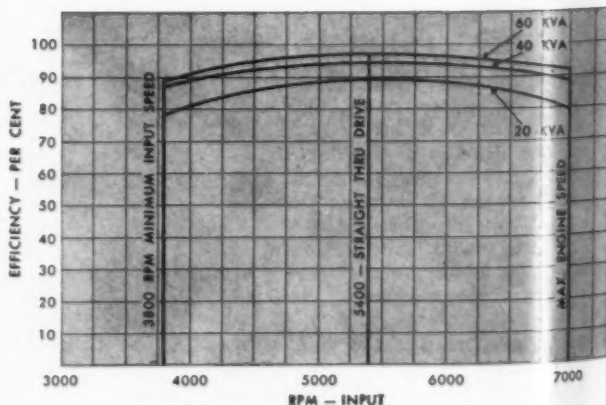
Drives, or is driven by, sun gear to control output speed at 6000 rpm in response to fluid flow exchange with variable delivery unit.

## A SIGNIFICANT ADVANCEMENT—

# Differential Type Constant Speed Drive For Aircraft Alternators

Tests now in progress on this 60 kva Vickers Differential Type Constant Speed Drive are proving its outstanding performance. (See curves) It combines Vickers dependable hydraulic pumps and motors with planetary gearing to provide a more efficient and lighter "package" than drives now available.

The differential type constant speed drive is a direct engine-driven transmission that can be either engine pad mounted or universal shaft driven. It employs the "differential drive" principle wherein the planetary gear train is the principal power vehicle and the hydraulic components differentially add or subtract speed and power to maintain constant output speed. For further information, write for Bulletin A-5221.



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# Monroney Forces Airport Aid Issue

- Takes issue with Quesada on all counts
- Action to be Congress' first major test
- Veto looms a distinct possibility

By DeWitt Ballew  
Business News Editor

The nation's airports, ill-equipped to meet the needs of the jet age, abruptly have become the focal point of political activity as Congress swings into its 86th session.

Before most legislators had unpacked their luggage, Sen. A. S. Mike Monroney presented the Senate with another bill (S.1) to pump aid into a faltering airport improvement and construction program. Last year the Oklahoma Senator offered an almost identical proposal only to see it die in Newport, Conn., where the President remarked that it was time for the Federal Government to "begin an orderly withdrawal from the airport grant program" and laid the unsigned bill aside.

The Administration has presented its own aid proposal, but Monroney, who now looms as the guardian of civil aviation on Capitol Hill, offered something the aviation industry considers much more practical and essential. In Monroney the industry found hope, for he is fresh from victory in sponsoring the legislation that created the new Federal Aviation Agency.

His success in getting the aid bill slotted in the number one spot on the Senate calendar is a direct challenge to the Eisenhower hold-down-the-spending policy. Airport officials hope the challenge will be strong enough to keep Congress aware of their many problems.

The chances for the Administration appear slim. So strong is support for S.1, it had 43 co-sponsors when introduced, that feeling on Capitol Hill is that the only possible hope the President's supporters could cling to would be some kind of a compromise.

Failure to reach agreement on legislation that fits in between the Administration's own proposal and the Monroney bill would be almost a sure bet to win the President's first veto. Equally sure in the mind of S.1's sponsor is that if the bill is vetoed Congress will not be slow in overriding it. The President has never been overridden on any major veto.

"need . . . self evident"



MONRONEY

"an orderly withdrawal"



QUESADA

The legislation proposed by the Administration and outlined for the Senate Aviation Subcommittee by FAA Administrator Elwood R. (Pete) Quesada calls for \$65 million in new obligational authority for fiscal 1960, with proportionately lower amounts in the next three years: \$55 million in 1961; \$45 million in 1962, and \$35 million in 1963.

The proposal would also increase the discretionary fund of the FAA administrator from 25% of the money

available to 50% to "provide badly needed flexibility," and permit funds unused by a state in the prescribed two-year period to revert to the administrator's discretionary fund without being reapportioned as prescribed under existing law.

The Monroney bill would hike aid to \$100 million annually from the present \$63 million level and would provide the administrator with a \$75 million discretionary fund immediately for emergency programs to meet the requirements of jet operations. Also woven into the Senate's S.1 is \$5 million annually for territorial airports. Alaska would receive aid at the rate of 45% of this, whereas the President requested \$10.5 million for a territory-to-state transitional fund for Alaska. In the President's request, government facilities other than airports are covered.

Another provision in S.1 would extend the bill to cover seal-coating and filling of joints in smaller airports. It would also provide for construction of certain airport facilities considered essential by both users and operators, whereas the Presidential offer is described as "stop at the gate" provisioning for it would provide nothing but the barest essentials. As one witness described it, it would keep passengers "safe, but not dry."

The total amount of government funds called for in the Monroney bill comes to \$575 million over a period of five years. The Administration proposal is for \$200 million over four years.

Strongly supporting Administration thinking, Quesada declared that S.1 would "cost the taxpayer a lot more than he ought to pay." The airlines have come of age, he said, and should begin paying their own way. He also backed a statement made by the President that the Federal Government should begin to withdraw from the program altogether. Quesada supported this view and remarked that the states and cities should take on more of the load and that needs could not be foreseen beyond 1963. Monroney commented that he assumes the Administration plans to stop airport aid at that time.

# Why the Extra Pilot for Jets?

## Paperwork and Radio, says AA

In a far-reaching decision late last December, American Airlines President C. R. Smith added a fourth flight crew member in the cockpit of AA's jet airliners. In the coming months, this new concept of crew requirements is expected to have telling effects on virtually every U.S. jet operator and quite possibly on some foreign carriers.

Impact of the American decision was virtually spontaneous. Eastern Air Lines, which had been in lengthy negotiations with its pilots, and with crew complement a main issue, quickly concluded an agreement with the Air Line Pilots Association that specified that its cockpits, too, would have three pilots in its four-man crews.

It is estimated that this additional man in the cockpit will cost American \$4 million a year, once all of its jets are in service. Boeing 707s entered service last month and a total of 80 pure jets will eventually be flying American's colors.

Now American explains the reasons for reaching this controversial conclusion. A company official gives this explanation of AA's position:

"Before we had acquired operating experience with the Boeing 707 we were of the opinion that a flight crew of three (pilot, copilot and flight engineer) should be sufficient for the day to day operation of this airplane. We were then of the opinion that no greater number would be needed, should be required or should be provided.

"Our actual operating experience with the Boeing 707 changed that opinion. After the Boeing 707 had been flown under simulated operating conditions for some time we came to this conclusion:

"1. Recent Federal regulations have increased the responsibility for record-keeping during the course of the flight; there are more records to be maintained and they are more detailed;

"2. Airways check points along the route, which were formerly passed over at a speed approximating 300 mph, would hereafter be passed over at a speed approximating 600 mph. The net effect of this would be to approximately double the number of check points to be recorded during the average hour of flight;

"3. While the work involving communications and record-keeping had increased, the ability of the third crew member, the flight engineer, to aid the pilots in getting this work done had decreased, because more of the total of

his time would need to be devoted to monitoring the instruments on the flight engineer's panel;

"4. There was a justifiable requirement for a fourth crew member, with most of his work to consist of communications and record-keeping;

"5. The company would have at a later time a surplus in the number of junior pilots, which it would like to keep employed if a logical assignment for them could be found;

"6. That it would be useful for the fourth crew member to be able to 'spell' the pilots and flight engineer during

the time that any one of them would need to be absent from the pilot's cockpit, and that the flight training of the junior pilots would be useful for that purpose;

"7. Thereafter, the company proposed to Air Line Pilots Association that a fourth crew member be added, that he be taken from the ranks of the junior pilots and that he be paid compensation approximating that paid to the copilots on the Convair operation. An agreement was reached on that basis."

Previously computed estimates of cost of the additional pilot are based on an assumption of a \$10,000 yearly salary, plus fringe benefits and travel expenses. Also, assuming an eight-hour utilization and 550 mph speeds, the added cost could be about 3c a mile.



## First Transport Rolls Out at McDonnell

McDonnell Aircraft Corp., 20-year veteran of military aircraft manufacturing, entered a new phase of growth late last month when it rolled out its four-jet utility transport at St. Louis' Lambert Airport.

The venture placed it right in the middle of competition with the Lockheed JetStar for both military and civil orders. McDonnell sees its Model 119 as actively in the market for business with the Air Force, Navy, Federal Aviation Agency and business aircraft users.

It was specifically designed as an all-weather aircraft to meet specifications for Air Force utility/cargo use or as an executive plane. It will carry 10

passengers, but could handle up to 26 as a personnel transport.

The plane rolled out for the press was without engines, but was equipped to take Westinghouse J34s, which will be added for first flight tests early this month. Later, with minor modification, the Model 119 will use the Pratt & Whitney JT-12 engines McDonnell has selected for general installation.

The new transport has a total gross weight with fuel for 2,200 nautical miles of 40,928 lbs. and a cruising altitude of 45,000 ft.

Its over-all length is 66 ft. 5.9 in. and span is 57 ft. 7.2 in. The over-all height is 23 ft. 7.7 in.

# ATOM: New Jet Takeoff Monitor

**Hamilton Standard makes its bid for lucrative turbine instrument market**

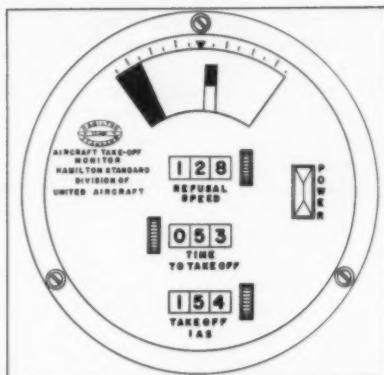
Latest contender in the highly competitive race to develop an acceptable takeoff "go/no-go" device for jet transports is Hamilton Standard Div. of United Aircraft Corp.

Called ATOM (Aircraft Take-Off Monitor), this new system has been developed with company funds, and has been undergoing Air Force evaluation at Wright Air Development Center in Boeing B-47 and North American B-45 multi-engine jets since late last year.

ATOM uses velocity, acceleration, and time as parameters, and combines them to predict whether or not the aircraft will attain takeoff velocity within the required distance. Cockpit instrumentation (see illustration) gives a continuous display of progress to refusal point by means of a red panel which creeps steadily across to the center mark in a window in the dial face. Predicted aircraft performance at the required takeoff point is indicated by a pointer in the same window.

As long as this pointer is centered on, or to the right of, the center mark, the pilot knows the takeoff will be accomplished successfully. If the pointer is to the left of the center mark, chances are the takeoff will have to be aborted. And, if the pointer is covered by the red panel when the latter reaches the center point, the pilot knows that he must take corrective action immediately.

The white portion of the dial face is graduated at five-knot intervals. Thus,



What the pilot sees. As long as pointer (top) is centered or to right, takeoff will be successful. If to left, chances are takeoff will have to be aborted.

relative position of the pointer to the left or right of the center mark will tell the pilot, in addition, how much slower or faster than required takeoff IAS he may expect to be traveling when he reaches the takeoff point.

To prepare ATOM for action, the pilot calculates his takeoff IAS, refusal speed, and time to required takeoff, from aircraft performance curves. He may set these on the indicator at any time prior to starting the takeoff run. The accelerometer signal, which triggers the system at the start of the run, will not have any effect as the result of comparatively minor, transient accelerations experienced during taxiing.

ATOM's computer predicts velocity by adding the existing velocity signal coming from the velocity transducer to a future velocity signal. The latter is obtained by multiplying the time remaining to takeoff by the signal coming from the accelerometer. The predicted velocity is compared to the required takeoff velocity signal set in by the pilot, and it's this comparison which is displayed in the cockpit.

The prototype version of Hamilton Standard's system weighs 5½ lbs. It's completely transistorized, and all critical portions of the circuitry are parallel. However, in the event of a failure, a light on the indicator, normally lit when the system is in use, goes out. In addition, the indicator pointer deflects into the STOP region.

## New DC-6Cs for CPA

**AirResearch delivers first of three aircraft**

The Garrett Corp.'s AiResearch Aviation Service division is converting three new Douglas DC-6As into multi-combination passenger/cargo DC-6Cs at Los Angeles International Airport for Canadian Pacific Airlines. The first plane recently was delivered to CPA ready for service.

The modified DC-6Cs can be set up for cargo or for passengers or to accommodate both at the same time. When doing double duty, the forward, or cargo, section may begin at mid-cabin or one of two other locations, each farther forward, with a corresponding change in seating capacity.

A permanent forward bulkhead has been built just aft of the cockpit to withstand cargo stresses. Another movable bulkhead closes the aft end of the cargo sections at any one of three stressed stations.

The forward door is used for loading freight while passengers enter amidships. Incidentally, two additional passenger windows were constructed in the forward cargo door. Seats are on tracks to permit changing the seating density with whatever area is used for passengers.

All passenger accommodations, including hat racks, air inlets, reading lights, curtains and rug, are readily removable to make way for cargo. Removable buffets are located at the passenger entrance, and at the extreme aft end are a coatroom and double lavatories.

AiResearch will also send a conversion kit to Eague Aircraft Co. in England where the same type of modification will be applied to another DC-6 owned by Maritime Central Airways of Canada.



## Testbed for Convair 880 Flies Transcontinental Nonstop

General Electric is using this modified Air Force RB-66A as a flying testbed for the CJ-805-3, powerplant for the Convair 880, and expects to amass 1,300 flight hours on the engines by Oct. 1. Recently, the plane was flown from Los Angeles to Washington, D.C.

at an average speed of 630 mph. The 3 hr. 36 min. flight was the longest to date for the engine. On another recent test flight, the CJ-805 powered RB-66A used 6,500 gals. of fuel, while the engines on a production RB-66A (earlier J71s) would have consumed 9,000 gals.



• **Convair rolled out** what it bills as "the world's fastest airliner" at San Diego on February 27. The sleek, 615 mph transport was held to a speed of 300 mph and did not exceed an altitude of 20,000 ft. on its maiden flight. It is the last of five different model American turbine transports built for the jet age market.

• **Hycan Manufacturing Co.** has acquired Gulf Industries, Inc., an aircraft parts producer. Hycan announced that it was the first of a series of acquisitions planned in the electrical and electronics field. Gulf will be operated as a wholly-owned subsidiary.

• **Northrop's Dr. William F. Ballhaus**, corporate vice president general manager of Nortronics, predicts the division's annual sales will reach \$300 million annually if present plans and programs materialize.

• **Lear, Inc.** has signed an agreement with Phoastron Instrument and Electronic Co. for Phoastron to produce certain multi-function flight indicators for airlines and private aircraft.

• **Avco Manufacturing Co.** has offered \$14,931,900 worth of 5% convertible debentures priced at par to its stockholders. Purchase rights expire February 10.

• **Grumman has sent** its agricultural Ag-Cat crop duster and sprayer on a tour of Latin America. Current plans call for demonstrations in six Caribbean nations.

• **Vickers' turboprop Vanguard** has passed the 10-hour stage in eight test flights. The five pilots who participated in the flights describe the transport as having "superior" visibility and a low noise level.

• **Lockheed Aircraft** is well into its program of beefing-up its C-130A Hercules. About 30% of the fuselage is being re-skinned and other modifications are being made. First redelivery was made late in January.

• **Boeing Airplane Co.**, involved in a suit against the Renegotiation Board for recovery of \$10 million declared as excessive profits, has had the case recessed until June 15.

• **McDonnell Aircraft** has filed a statement taking exception to a report by the General Accounting Office which criticized the company's earnings on one of four F3H production contracts.

## DEFENSE ANGLES

By Betty Oswald

• **Congress wants to know** whether Defense Department has downgraded the importance of the nuclear-powered aircraft. Has the spending of \$1 billion over 13 years been stretched out too far? Has off-again, on-again funding been responsible for the expected embarrassment of seeing a Soviet-designed and developed nuclear aircraft in the sky ahead of the U.S.? Has the decision to deal with the tough thrust-to-weight ratio problem of the propulsion unit through a single manufacturer, with a single approach, over the last three or four years been responsible? What part did the feuding between the Navy and Air Force play in the failure to get on with the job? It also would like to know why, if the Defense Department is taking the program seriously, it persists in funding at what amounts to starvation rates.

• **Defense Secretary Neil H. McElroy** still persists in voicing his satisfaction with the relative strength of the U.S. and Russia even though he concedes that Russia is now moving ahead with the development of a very large jet bomber which he "presumes" is supersonic. Part of Congressional worry stems from the fact that current U.S. strength is dependent on and will continue to depend on the 10-year-old B-47. Feeling is aggravated because Mr. McElroy concedes that, with the dawn of the missile era in Russia, planes of the Strategic Air Command will have to spend more time in the air during periods of tension.

• **Important question** in the current battle over renegotiation is whether aircraft builders have the right to subpoena records and reports of the Air Force and the Renegotiation Board for insertion in Tax Court hearings. So far Boeing Airplane Co., which is trying the question out, has been unable to convince the District Court that a subpoena should be issued. It is expected that an appeal will be taken.

• **The status of cost principles** to apply to all defense contracts (the Pentagon has been working on them since 1948) is still uncertain. Dis-

agreements not only continue between the Defense Department and the Army, Navy and Air Force, but within the Services themselves. Result is that long-awaited revision of Section 15 of the Armed Services Procurement Regulation may be held up indefinitely unless Assistant Defense Secretary E. Perkins McGuire (Supply and Logistics) decides to ram it through. Procurement Assistant Secretaries are now studying the latest drafts along with Asst. Secretary W. J. McNeil.

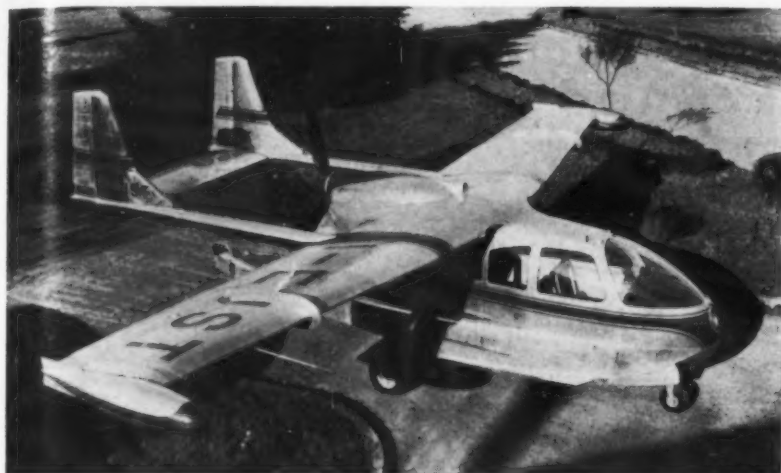
• **Decision as to what** constitutes the current aircraft manufacturing industry for purposes of the Walsh Healey minimum wage statute is due from the Labor Department about Feb. 14. Questionnaire will then be sent to selected manufacturers for the purpose of establishing a new minimum wage base. Proposed redefinition is opposed by Electronic Industries Association on the ground that new definition would boost costs for members who now pay lower minimum wages than the aircraft manufacturers.

• **Military Air Transport Service** will lose two squadrons in the fiscal 1960 economy program. However, DOD fiscal experts and the Budget Bureau say that there will not be any reduction in airlift capability because Air Force will be allowed to buy new jet and turboprop transports to take the place of small obsolete propeller-driven planes.

• **What will the retirement** of about 58 senior general officers from the Air Force mean in the way of changes in policy and administration? Who will be tagged for promotion? Who will be saved from compulsory retirement? These are all the subject of major speculation around the Pentagon corridors, as the biggest game of musical chairs ever will be played this spring.

• **Joint Chiefs of Staff** are busy planning to supply Berlin by airlift if the need again arises. Alternate plans call for use of surface transportation or a combination of airlift and surface transport. However, in view of NATO attitudes chances are that MATS and the civilian reserve air fleet will be handed the tough supply problem.





## Nardi Aims FN-333 at U.S. Market

Nardi S. A. Per Costruzioni Aeronautiche, Milan, Italy is flight testing a new light amphibian called the FN-333.

Designed with American markets in mind, the FN-333 is all-metal, four-place, with retractable gear and floats. It is powered by a 240-hp Continental O-470-H and has a reversible constant-speed Hartzell propeller.

The airplane has been granted an FAA Type Certificate and is scheduled to go into production in February with deliveries starting in early 1960.

American distributor will be Hobart A. H. Cook, North Lindenhurst, L.I., N.Y.

Price is said to be \$30,850 which includes a full panel with VHF transmitter and receiver.

### —Nardi FN-333 Specifications—

WEIGHTS	
Empty .....	2,028.3 lbs.
Gross .....	2,976.24 lbs.
PERFORMANCE	
Max. speed .....	180 mph
Cruise speed .....	166 mph
Sea level stall .....	63 mph
Normal range .....	497.10 mi.
Max. range .....	683.43 mi.
Service ceiling .....	17,980 ft.
Rate of climb .....	1,279 fpm



## Junior Jatos for Super 18; Safety Power at \$50/Second

Owners of the new twin-engine Beechcraft Super 18 can "blast off" with these optional standby rockets.

Designed by Aerojet-General and designated Model 15NS-250 "Junior JATO" the units are used to give instant power in event of an engine

failure during takeoff or to make short-field takeoffs over obstacles.

Each solid-propellant motor gives 250-lbs. thrust for a 15-sec. duration, which is equivalent to 100 hp at climbing airspeed. Fired from the cockpit by an electric switch, the rockets re-

duce propeller loads and allow the primary engines to develop full power more quickly.

Installed weight of the units is about 50 lbs. with the propellant charge accounting for about 42 lbs. Calculations show performance gains are more than ten times as great as the performance increase required by the additional weight.

Mounted on each wing within the engine nacelle fairing, the rockets can be removed and replaced in minutes. Carriage life is 500 hrs. or one year, whichever occurs first. Once fired the units are discarded and replaced at a cost of \$375 each.

## Mid Continent Airmotive Becomes PAC Subsidiary

Mid Continent Airmotive Corp. has become an independently operated subsidiary of Pacific Airmotive Corp.

The new company will use the former PAC facilities at Denver, Kansas City, and Chicago with Horace A. Smith, former Kansas City PAC branch manager serving as president.

Mid Continent will distribute and sell major equipment to aircraft maintenance companies as well as private and airline operators in 18 states in the Northcentral, Central, South and Southwest.

## ... Business Flying Briefs

• **Sinclair Oil Co.'s** 23-plane business aircraft fleet averaged 548 hrs. per plane in 1958, flew 12,602 hrs. total, and covered over 1.8 million miles. Operations utilized 397 airports in every state except Vermont on 7,643 individual flights. Average distance per trip was 248 mi.; average time, 1.71 hrs., for an average speed of 145 mi.

• **Skymotive**, exclusive fixed-base operator at Chicago O'Hare International Airport, has been taken over by Shell Oil Company as a wholly owned subsidiary.

• **EFSCO Products Div.** of Engle Flying Service, Inc., 3M Airport, Bristol, Pa. offers a new three-piece control lock system for Cessna owners. Consisting of two individual aileron locks and a combine rudder and elevator lock, it fits Cessna 172, 175, 180, 182 and Skylane aircraft.

• **Air Associates** branches have been appointed distributors for Boulevard Electronics, makers of low-frequency converters and aircraft radio transistor power supplies.

# Authorities, Regional Programs Gain Momentum

By Mel Sokol  
Airports Editor

Federal aid to airports is just that—an aid, but no panacea for the mounting cost of airport development. Even when a city's 25% contribution is hitched to the 25% state and 50% federal participation, the expense of building and operating an airport imposes a heavy drain on city finances.

Actually, with available federal aid funds disproportionately low in relation to need, the formula has operated in theory rather than fact, and more and more municipalities are becoming hard put to meet the seemingly insatiable demands of growing air traffic.

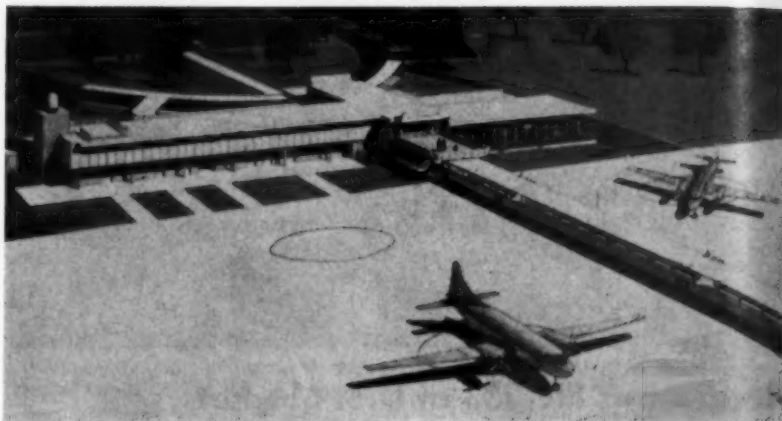
The problem, although now more acute, is not new. Nor are some of the solutions being sought to ease the strain on local budgets. Notable is the increasing trend toward airport "authorities," growing recognition of the merits of regional airport development, and the assumption of greater responsibility by states for airport development.

In Maine, a recommendation for state ownership and operation of all airports used by air carriers is being considered by the state legislature. Immediately affected, should the measure become law, would be seven airports: Auburn-Lewiston, Bar Harbor, Houlton, Millinocket, Portland, Rockland and Waterville.

Other New England states already have authority, enabling them to take over airport facilities. Among them are Vermont, New Hampshire, Connecticut, Rhode Island and Massachusetts. In most, this authority is limited or may be exercised by the state in limited areas or in special situations only.

Massachusetts, for example, recently created a Port Authority to take over airports in the Boston area, Logan International and Hanscom Field. A \$72 million revenue bond issue is being offered this month to finance acquisition and development of Boston's air, highway and seaport facilities.

Vermont has authority to take over operation and management of an airport in difficulties, carry and run it until such time as it attains the status of a going concern, then turn it back to its owners. Among other states operating one or more public use or air carrier airports under enabling state statutes are South Carolina, Pennsylvania, Michigan, and Alabama.



**NEW \$1 MILLION TERMINAL** at Dannelly Field, Montgomery, Ala., has accommodations for four airlines although only Delta and Eastern now serve the city. Long structure in foreground is portion of 450-ft. concourse connecting with the control tower (not shown). Among passenger conveniences is a 300-car parking area.

Airport authorities are gaining stature as a means of speeding airport projects by eliminating certain delays inherent in control by a city governing body. Since passage of enabling legislation in Nebraska in 1957, six cities have created airport authorities. Illinois raised its total to 19 last year. Pennsylvania now has 20 authorities, the most recent being the Bedford County Airport Authority.

A bill to permit airport authority "districts" has been introduced in the current Indiana state legislature. It would also foster regional airport development. Such a district could be formed by any city with a population exceeding 128,000, by a city and a county, by several cities, several counties, or other combination.

The concept of regional airport development is not new as exemplified in existing county, twin-city, tri-city and other metropolitan area airports, some crossing state lines.

In Florida, Dade County—which this month dedicated a mammoth new terminal at Miami International Airport—and adjoining Broward County to the north are moving closer to long-range plans for a joint expansion of neighboring county airports.

In Michigan, six counties in the Detroit area and three counties in the Muskegon/Grand Rapids areas are trying to get together on regional airport development. Initially, these and other similar efforts may founder, as they have in the past, because of problems

in reconciling differing political factions and petty jealousies. The consensus, however, is that inevitably, the sheer force of events and circumstances will lift them off the ground.

## Detroit Sets Landing Fees For Non-Carrier Aircraft

Detroit Metropolitan Wayne County Airport on March 1 will begin to collect landing fees on all itinerant aircraft, private, commercial or for-hire.

Here are the fees, including free parking for eight hours:

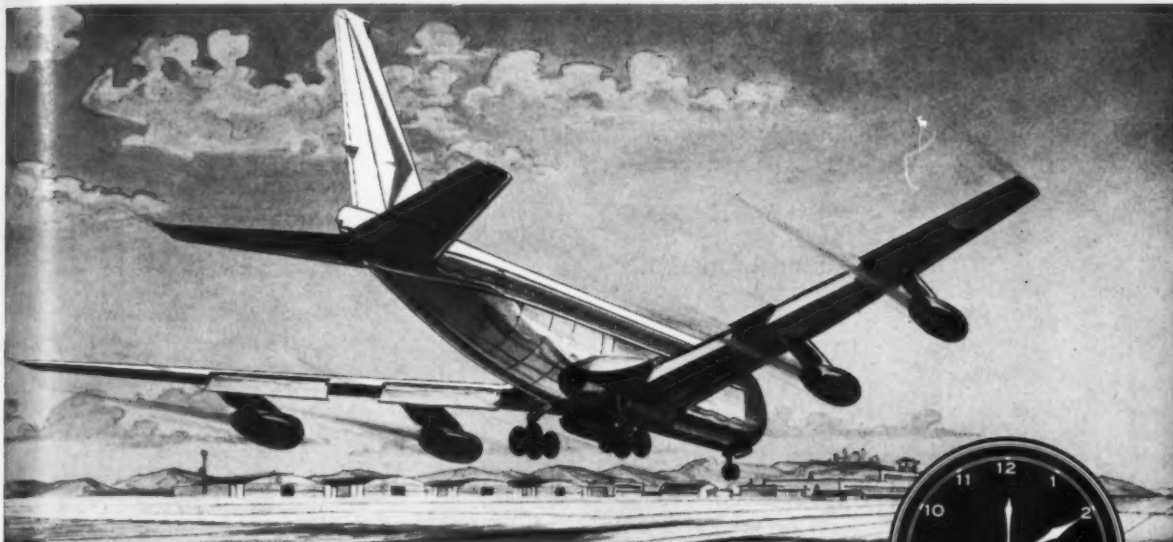
CLASS	PRIVATE	COM.
A .. 0- 3,000 lbs.	\$ 1.00	\$ 1.00
B .. 3,000- 7,500	1.50	2.00
C .. 7,500- 12,500	2.00	4.00
D .. 12,500- 20,000	3.25	6.50
E .. 20,000- 30,000	5.00	10.00
F .. 30,000- 50,000	8.00	16.00
G .. 50,000- 75,000	12.50	25.00
H .. 75,000-100,000	17.50	35.00
I .. 100,000-125,000	22.50	45.00
J .. 125,000-and over	25.00	50.00

## ... Airport Briefs

• **Dade County (Fla.) Port Authority** is considering a proposal for an all-jet airport on Soldier Key. Plan would transfer all jet operations from Miami International Airport to the proposed new location.

• **Willow Run Airport** is expected to become a giant general aviation facility. Eventual move of all airline operations to Detroit Metropolitan Wayne County Airport is deemed a certainty.

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## ESSO PERFECTS JET AGE REFUELING FOR FAST, SAFE, DEPENDABLE SERVICE

Fast turn-around is essential to profitable airline operations. With the increased fuel capacities of the great new jet airliners, faster refueling becomes more important than ever before. Anticipating these jet age demands, Esso engineers have perfected *two* basic methods for refueling large airliners safely—and on schedule.

**HYDRANTS**—The Esso-developed hydrant refueling system was first installed 11 years ago. This practical and efficient

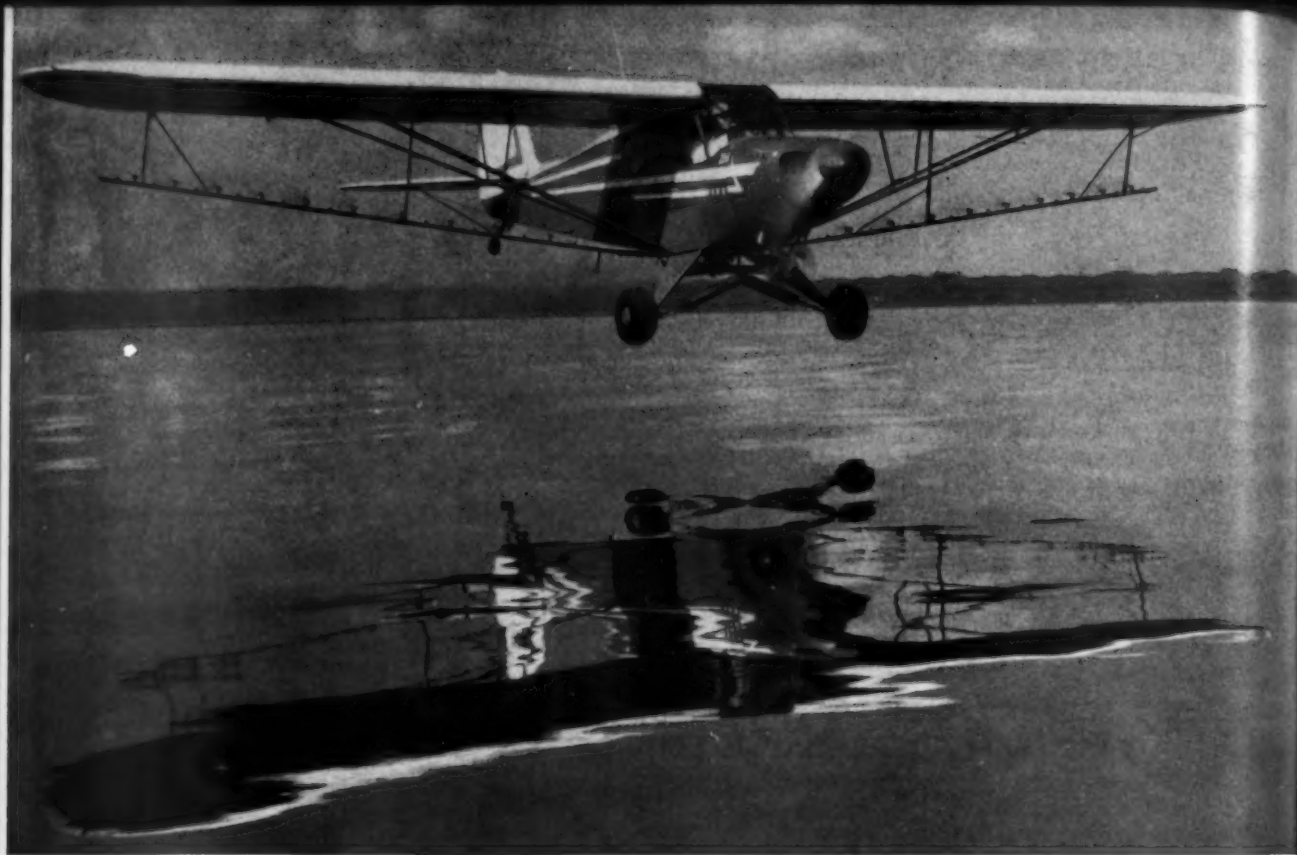
method has since proved ideal for busy airports. New high-speed hydrant refueling systems are now being installed to serve the large jet airliners.

**NEW REFUELING TRUCKS**—New Esso refuelers feature greater capacity, higher pumping rates, improved filtration and greater mobility—to meet the increased demands of jet age airliners.

These modern refueling systems are two more examples of Esso leadership in petroleum service for today and tomorrow.







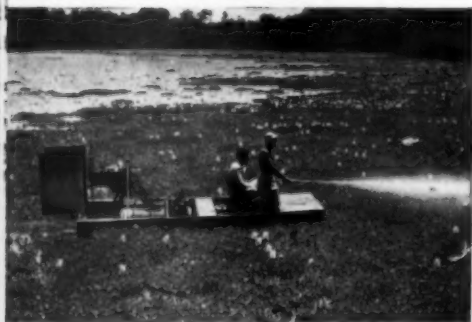
Spray plane approaches Lake George hyacinth bed low and slow

# Florida's Winged Watchdogs

by HERB FISHER

international aviation authority, veteran test pilot, author

**An inside report on the Aviation Section of the Florida Game and Fresh Water Fish Commission... another in a series on why business and private aircraft, like the world's major airlines, use Champion Spark Plugs**



Airboat eradicates waterway-clogging hyacinths with spray-hose.

National publicity resulted recently (LIFE, etc.) when Wildlife Officers successfully restocked forest with wild turkeys via airlift.



**E**ver fly the Everglades—five feet off the water?

Pluck shipwreck victims from choppy seas? Hedge-hop the "green side of hell" by night? Spray low in a fixed-wing with flaps down? Airlift wild turkeys? Fly "queen-bee" for patrol boats converging on fish and game law violators—or fleeing criminals? Flush ducks—count and identify them—on a low pass? Strafe "rough fish" with poisonous chemicals?

Or wade armpit-deep in a pit-of-terrors—alligators, quicksand, leeches, venomous moccasins and mosquitoes using your head for a GCA? Maintain, singly and as a unit, your own aircraft or airboat—major engine and airframe

overhaul to simply finding "the bug"? Lecture, do reams of reports?

Flying Wildlife Officers of the Florida Game and Fresh Water Fish Commission's Aviation Section do some of it all of the time and all of it some of the time.

They're picked men: No margin for error in this diverse precision work. Takes intense concentration, unusual skill...

Picked machines—aircraft, parts and equipment; "swamp-buggy" airboats, "kicker" motorboats—backed by a remarkable maintenance operation. For



Mr. Fisher

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there's no place for breakdown . . .

Chief of Aviation, Chief Pilot and Chief A & E Mechanic is William S. Durkee, an old pro with single- or multi-engines, land or sea—commercial, military and barnstorm.

Immediate responsibility of Durkee's crack outfit is the security and progress of four million acres of Florida wildland, peppered by 30,000 named lakes laced by stream and marsh. But assisting federal, military and other state agencies is routine:

Like when fire menaces life and property in a national forest. Or in Civil Defense emergencies. Or when lawmen are after somebody or something in the back-country. Or when migratory waterfowl need a federal census. Or, jurisdictionless, when human life hangs by a hair in swamp, forest or Gulf . . .

Seven pilots, four A & E mechanics, eight planes do it. All are on 24-hour call—and, sometimes, duty. Headquarters, centrally located: Ocala Airport.

There, in a well-equipped hangar *pilots and mechanics built*, beyond call of duty, the Aviation Section not only gives major engine and airframe overhauls to all its planes, but also to airboat engines, majored at 600 hours! The Commission operates 62 airboats.

A typical three-month period, from the pilot log: Day patrol, 607 hours; night patrol, 52 hours; hyacinth spraying, 27 hours; aerial photography and survey, 62 hours. For this same period, the *pilot log* shows 9,000 miles' ground patrol, 425 hours for special office duties, 550 hours assisting other departments—900 hours on *maintenance*.

"In addition to maintenance and flying qualifications that many pilots just don't have, our pilots must have—and they do have—a genuine interest in game and fish conservation," Durkee stressed. "Top pilots, top mechanics, heroes of rescue that we insist remain anonymous—yes, they're all these and more. But first and foremost, they're Wildlife Officers."

Flying Wildlife Officers, whose two-

A 70-mph airboat on patrol in hazardous Everglades. Airboats run 600 hours on Champions used in aircraft for 300 hours!—a unique and grueling "double-life" for spark plugs.



way radio communication with all units—air, land, water—makes possible a highly coordinated operation—vital, in fact, to enforcement and rescue phases.

Despite constant hazard, the Aviation Section has flown 10,000 hours without major accident. It was founded 3½ years ago as an outgrowth of a one-plane operation begun in 1948. Patrol and spray flights now exceed 5,000 hours and 115,000 square miles annually.

Firing this air-water-land force to life day and night are spark plugs indicative of the Commission's uncompromising policy on men and equipment: Typical of procedure, the Aviation Section tried several types to determine for themselves the most dependable for the vital heartbeat of the engine—ended up with Champion Spark Plugs exclusively. In plane, airboat, motorboat, truck, jeep,

patrol car, shop equipment.

And herein lies a "double-life" saga unique in performance annals: Despite these severe operating conditions, the Commission runs Champions 300 hours in its aircraft—four Pipers, three Cessnas and a pontooned Stinson—then "bumps them down" and runs them another 600 hours in airboats! And when these airboats come in for a 600-hour major, their aircraft engines are worn out!

"Frankly, I don't see how these airboats give peak performance for 600 hours—you should see some of them in for overhaul," Durkee said. "And the beating the spark plugs take for 300 hours in low, slow flying, with high cylinder-head temperatures, then full throttle—then to run another 600 hours in poorly cooled airboat engines! Patrol airboats sometimes run 70 mph—and hyacinth-control airboats often turn up 3,200 rpm's blasting and rocking off mud flats. Add hot weather and salt-air humidity to that cylinder temperature, too!

"Here's a 900-hour 'double-life' on heavy engine-load both ways—plane and airboat—and, often we remove plugs before we really need to!"

They take no chances. Airboat engine failure can be almost as perilous as an aircraft forced-landing, especially in the Everglades. Took an airboat officer 30 hours to slog seven miles once . . .

Its peak performance has made the Aviation Section an important integral part of Florida's nationally acclaimed conservation and enforcement program.

Those responsible are the winged watchdogs of a wilderness wonderland.

Pilots and mechanics work together to maintain own planes plus 62 airboats—from airframe to major engine overhaul! Pilot-mechanic William S. Durkee (R), Chief of the Commission's Aviation Section, supervises and pitches in.



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*Your office can be this pressurized,  
efficient business aircraft*

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Custom interiors, like the demonstrator shown above now on a nation-wide tour, are designed by AiResearch engineering specialists and interior stylists to meet individual company requirements. AiResearch conversion has increased the range of this superior business aircraft 50 percent over the commercial model and has increased the gross weight. Outer wing panel fuel tanks assure you one-stop, coast-to-coast flights with ample fuel

reserve for instrument weather.

Other modifications include installation of auxiliary power units, new instrumentation, new electrical, hydraulic and pneumatic systems, plus radar and auto-pilot (optional). These improvements, exterior painting and relicensing of the aircraft are done by AiResearch specialists meeting all CAA regulations.

AiResearch Aviation Service has performed more executive modification programs on Convair 240s, 340s and 440s than any other company. You are invited to inspect our more than 150,000 square feet of floor space representing the finest conversion, modification and servicing facilities available. Free brochure mailed on request.



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# STATISTICS

## Summary of U.S. Airline Traffic for October 1958 vs. October 1957

Compiled by American Aviation Publications from Official CAB Data

Airlines	Revenue Passengers			Revenue Passenger Miles			Total Ton Miles Rev. Traffic			% of Available Ton Miles Used	
	1958 (In Thousands)	1957 (In Thousands)	% Change	1958 (In Thousands)	1957 (In Thousands)	% Change	1958	1957	% Change	1958	1957
<b>DOMESTIC</b>											
American	704	679	3.7	455,701	428,497	6.3	56,395,861	51,207,817	10.1	60.2	53.9
Braniff	193	185	4.3	81,913	79,182	3.4	9,004,818	8,456,994	6.5	51.1	48.3
Capital <sup>1</sup>	190	369	-48.5	76,392	143,717	-46.8	7,979,036	15,027,802	-46.9	52.4	49.8
Continental	77	75	2.7	37,372	34,085	9.6	3,882,733	3,560,825	9.0	46.2	41.4
Delta	240	234	2.6	116,238	112,862	3.0	13,311,312	12,372,051	7.6	55.2	52.4
Eastern	469	482	-1.9	332,241	342,994	-3.1	34,937,990	36,002,371	-2.9	49.5	53.2
National <sup>2</sup>	115	17	576.5	59,545	9,571	522.3	6,599,600	1,055,467	525.3	42.8	33.6
Northeast	73	71	2.8	24,390	27,518	-11.4	2,532,259	2,816,338	-10.1	30.1	36.3
Northwest	149	124	20.2	100,892	80,781	24.9	11,629,737	9,239,919	25.9	52.5	45.1
Trans World	421	405	4.0	331,184	313,650	5.6	36,045,978	34,009,873	6.0	59.5	50.4
United	626	540	15.9	439,332	396,222	10.9	53,095,289	47,101,310	12.7	58.4	55.0
Western	123	119	3.4	62,491	57,704	8.3	6,692,084	6,165,564	8.5	43.4	49.5
<b>TOTALS</b>	<b>3,588</b>	<b>3,500</b>	<b>2.5</b>	<b>2,118,411</b>	<b>2,026,783</b>	<b>4.5</b>	<b>242,106,697</b>	<b>227,017,131</b>	<b>6.6</b>	<b>54.7</b>	<b>51.7</b>
<b>TERRITORIAL</b>											
Caribair	17	16	6.3	1,194	1,096	8.9	130,428	118,368	10.2	63.1	57.0
Hawaiian	31	31	0.0	8,459	4,603	83.0	879,795	508,579	73.0	58.7	54.4
Trans Pacific	12	16	-25.0	1,672	2,269	-26.3	141,434	192,716	-26.6	50.6	56.6
<b>TOTALS</b>	<b>60</b>	<b>63</b>	<b>4.8</b>	<b>11,325</b>	<b>7,968</b>	<b>42.1</b>	<b>1,151,657</b>	<b>819,663</b>	<b>40.5</b>	<b>58.0</b>	<b>55.6</b>
<b>INTERNATIONAL</b>											
American	10	10	0.0	8,842	6,746	30.7	1,171,638	1,005,054	16.6	46.7	62.9
Braniff	3	4	-25.0	6,693	8,117	-17.5	846,034	999,947	-15.4	43.2	45.7
Delta	4	5	-20.0	4,307	6,440	-35.1	532,159	794,355	-33.0	38.5	50.6
Eastern, Overseas	26	28	-7.1	38,084	38,380	-0.8	4,135,194	4,208,605	-1.7	51.2	53.7
San Juan	20	21	-4.8	30,707	29,854	2.9	3,314,998	3,267,163	1.5	52.5	57.2
Bermuda	3	3	0.0	2,201	2,742	-19.7	232,017	287,064	-19.2	43.7	55.3
Mexico	3	4	-25.0	5,176	5,782	-10.5	588,179	654,378	-10.1	47.7	48.3
National <sup>1</sup>	6	2	200.0	4,978	3,174	56.8	589,895	347,888	49.6	46.1	47.6
Northwest	12	10	20.0	29,088	22,571	28.9	5,500,960	4,034,787	36.3	69.9	66.0
Hawaiian	1	1	0.0	3,788	2,850	32.9	445,473	324,226	37.4	58.6	54.6
Panagra	11	12	-8.3	14,454	13,645	5.9	2,087,900	2,009,244	3.9	57.6	56.4
Pan American, System	218	216	0.9	314,873	313,752	0.4	45,274,114	45,167,185	0.2	63.5	62.7
Latin American	85	93	-8.6	91,074	99,456	-8.6	13,882,103	16,232,220	-16.9	51.3	64.3
Atlantic	108	96	12.5	134,010	119,416	12.2	18,541,152	16,067,765	15.4	62.6	59.2
Pacific	23	23	0.0	87,219	89,678	-2.7	12,380,358	12,148,038	1.9	68.5	65.6
PDX SEA-HON.	1	1	0.0	2,469	2,804	-29.8	326,941	409,950	-20.2	43.5	47.8
Alaska	2	4	-50.0	2,570	5,002	-48.6	445,501	720,162	-35.4	46.8	60.3
Trans Caribbean	5	5	0.0	8,544	8,544	0.0	748,016	748,016	0.0	64.2	64.2
Trans World	34	28	21.4	107,048	72,940	46.8	14,057,307	9,254,801	51.9	68.4	60.5
United	8	8	0.0	19,285	19,048	1.2	2,206,534	2,128,591	3.7	54.6	58.1
Western	2	2	0.0	3,312	2,825	17.2	368,212	318,061	15.8	60.7	54.1
<b>TOTALS</b>	<b>340</b>	<b>325</b>	<b>3.1</b>	<b>559,508</b>	<b>507,858</b>	<b>10.2</b>	<b>77,517,963</b>	<b>70,268,518</b>	<b>10.3</b>	<b>62.3</b>	<b>62.1</b>
<b>LOCAL SERVICE</b>											
Allegheny	48	42	14.3	8,643	7,230	19.5	893,394	736,789	21.3	55.5	44.1
Bonanza	15	13	15.4	3,619	3,000	20.6	362,206	297,931	21.6	43.4	42.3
Central	14	11	27.3	2,601	2,260	15.1	271,116	230,521	17.6	32.7	32.1
Frontier	19	20	-5.0	4,748	5,421	-12.4	549,006	618,610	-11.3	51.3	65.6
Lake Central	18	16	12.5	2,997	2,458	21.9	314,730	255,382	23.2	48.0	40.6
Mohawk	48	44	9.1	9,498	8,296	14.5	953,438	846,950	12.6	60.0	49.1
North Central	71	61	16.4	11,962	9,799	22.1	1,215,889	997,748	21.9	51.0	47.2
Ozark	42	40	5.0	7,443	6,400	12.8	767,220	675,818	13.5	54.4	46.4
Pacific	35	30	16.7	7,619	6,613	15.2	748,413	653,216	14.6	50.3	56.4
Piedmont	41	39	5.1	8,437	7,960	6.0	857,474	810,609	5.8	58.4	39.6
Southern	21	19	10.5	3,933	3,692	6.5	411,006	380,416	8.0	41.0	50.3
Trans-Texas	24	22	9.1	5,527	5,137	7.6	585,487	541,793	8.1	44.2	42.5
West Coast	23	23	0.0	4,492	4,043	11.1	444,179	397,076	11.9	50.4	45.8
<b>TOTALS</b>	<b>419</b>	<b>380</b>	<b>10.3</b>	<b>81,519</b>	<b>72,509</b>	<b>12.4</b>	<b>8,373,760</b>	<b>7,442,859</b>	<b>12.5</b>	<b>50.7</b>	<b>47.1</b>
<b>HELICOPTER SERVICE</b>											
Chicago	12	8	50.0	212	133	59.4	21,410	14,552	47.1	29.6	31.4
Los Angeles	3	2	50.0	108	96	12.5	17,301	15,955	8.4	60.0	58.2
New York	9	6	50.0	184	117	57.3	20,546	14,884	38.0	45.9	40.2
<b>TOTALS</b>	<b>24</b>	<b>16</b>	<b>50.0</b>	<b>504</b>	<b>346</b>	<b>45.7</b>	<b>59,257</b>	<b>45,391</b>	<b>30.5</b>	<b>40.6</b>	<b>41.3</b>
<b>ALASKAN</b>											
Alaska	8	6	33.3	4,116	2,331	76.6	684,634	528,543	29.5	40.0	41.4
Alaska Coastal	4	4	0.0	330	387	-14.7	42,817	48,404	-11.5	68.2	67.6
Cordoba	1	2	-50.0	141	250	-43.6	50,808	123,937	-59.0	46.5	49.4
Ellis	4	4	0.0	224	260	-13.8	26,785	30,758	-12.9	74.4	72.9
Nor. consolidated	2	1	100.0	578	442	30.8	156,331	149,274	4.7	62.8	64.5
Pacific Northern	9	9	0.0	7,985	7,882	1.3	1,361,057	1,227,584	10.9	63.7	56.4
Revere	1	1	0.0	836	641	30.4	212,016	144,462	46.7	63.0	48.8
Wien	3	2	50.0	813	620	31.1	339,247	245,948	37.9	54.8	60.9
<b>TOTALS</b>	<b>32</b>	<b>29</b>	<b>10.3</b>	<b>15,023</b>	<b>12,813</b>	<b>17.2</b>	<b>2,873,695</b>	<b>2,498,930</b>	<b>15.0</b>	<b>54.6</b>	<b>52.7</b>

<sup>1</sup> Can. 1958 figures reflect strike period.

<sup>2</sup> Nat. 1957 figures reflect strike period of 32 days.



## INTERNATIONAL REPORT

By Anthony Vandyk

The office workers in the terminal building at Le Bourget Airport, Paris, seem to have a particular dislike for the Viscount, according to a survey by the Paris Airport Authority. The high-pitched whining noise of the aircraft's Dart engines is described as "intolerable" for people trying to work in the majority of the terminal building offices. The office workers quizzed by the Paris Airport Authority mentioned "nervousness and fatigue" induced by the continuous movements of Viscounts in front of the building. They said that the whining noise often rendered telephone conversation impossible. The Paris Airport Authority's survey also showed that the smell of turbine fuel—whether from a Viscount, a Tu-104 or a 707—is in evidence in many parts of the terminal building at Le Bourget.

• **Realistic schedules?** A ridiculous situation whereby Swissair's and British European Airways' flights between Geneva and London depart virtually at the same time may end on April 1

when the two carriers will start to operate all their services between Britain and Switzerland in pool. At present, except at weekends, there is only one flight a day in each direction between Geneva and London. The Swissair flight leaves at 2:20 while BEA's flight departs five minutes earlier. In the reverse direction the situation is about the same: BEA's Viscount departs at 9:55 while the Swissair Convair leaves at 10:20!

• **No time to sleep**—Airlines' sales personnel in Europe bemoan passengers' reluctance to use night coach flights. Basic trouble is the distances are too short and thus there is insufficient time to get a night's sleep during the flight. Moreover, the night coach flights tend to arrive at times when public transportation is not operating. The result is often an expensive cab ride to a hotel (where nocturnal check-ins are not always welcome) or a few hours rest in the airlines' downtown terminal. Recently we sampled one of these night coach flights (for the record it was BEA's 258 from London to Geneva

on January 9). It was a bitterly cold night but the bus to London Airport was unheated. Worse still the Viscount was completely frigid and it did not warm up sufficiently to enable passengers to remove their top coats until it had been in the air for half an hour.

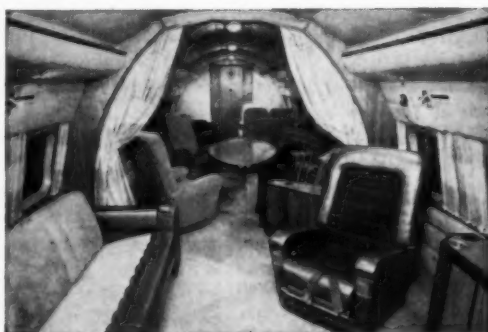
• **A bad State decision**—It is unfortunate that the State Department has decided to shift Dave Ernst from his post of Civil Air Attaché in Paris. For one, the timing is bad. Ernst has been one of the key figures in the bilateral negotiations between France and the U.S. in recent years. Since the French government denounced the bilateral last year, the situation has become more delicate than ever and there is need for a man on spot in Paris who is fully informed on the situation. During his service in Paris, Ernst has done an excellent job in building up an informal relationship with men of importance of all branches of French aviation. It is no doubt the success of his mission that made State Department give him the post of U.S. consul in Suva, Fiji, where he will have responsibilities covering a wide area of the South Pacific. But here is where the second criticism of this appointment must be made. By giving him this new job, State effectively jettisons all the intimate knowledge of civil aviation diplomacy which Ernst learned during years in Washington and subsequently in Paris. He is one of the very few State officials who have had this type of aviation experience. Surely, he could have been rewarded for his good work with a better job in the aviation field. There must be plenty of good career diplomats who could take on the job of U.S. consul in Suva, but there are indeed very few qualified to step into the Paris Civil Air Attaché spot.

• **For better British research**—The research work of the British aircraft industry will be greatly facilitated by use of the new supersonic windtunnel operated by Aircraft Research Association Ltd. The addition of this tunnel to the cooperative test facilities of ARA means that models of appreciable size giving realistic Reynolds numbers may be tested to Mach numbers near 3.5. The new tunnel is a continuous flexible wall tunnel with a working section 2¼ ft. wide and 2½ ft. high. For medium to high Mach numbers model lengths of about 30 in. are used. One feature is the possibility of making remote changes of Mach number, pitch and roll while the tunnel is in operation.

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FEBRUARY 9, 1959

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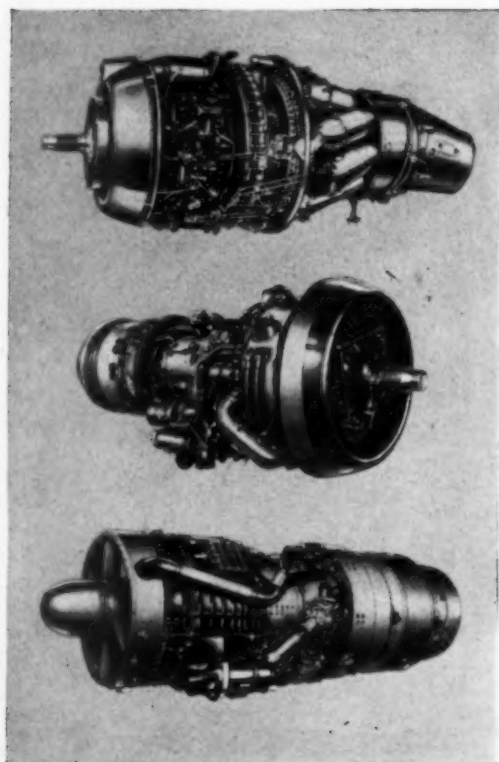
# A NEW ERA



## **THE ROLLS-ROYCE CONWAY BY-PASS JET ENGINE**

*has now been granted a full certificate of airworthiness by the Air Registration Board at a minimum rating of 17,000 lb. thrust. Conways are now being delivered to aircraft manufacturers.*

**ROLLS-ROYCE EXPERIENCE IN THE AIRLINE OPERATION OF GAS TURBINES IS UNIQUE**



### **THE DART**

—the first, and for four years the only prop-jet in airline service has flown over 6,000,000 hours. The Dart is currently operating at overhaul lives of up to 2,200 hours.

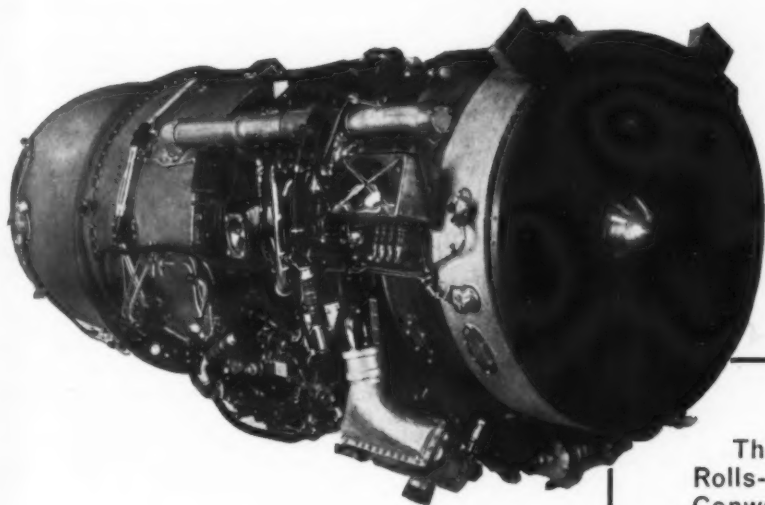
### **THE TYNE**

—a most advanced prop-jet engine, is due to enter service in 1960 at ratings of 4,985, 5,525 and 5,730 e.h.p. It has a specific fuel consumption comparable with the latest compound piston engines.

### **THE AVON**

—the first turbo jet on the North Atlantic route, and now in daily service, began scheduled operations with an approved overhaul life of 1,000 hours.

# AIN JET POWER



**DEVELOPED  
FROM  
EXPERIENCE**

The by-pass principle which Rolls-Royce have proved in the Conway engine is now accepted as the correct formula for all jet transport and for certain military applications.

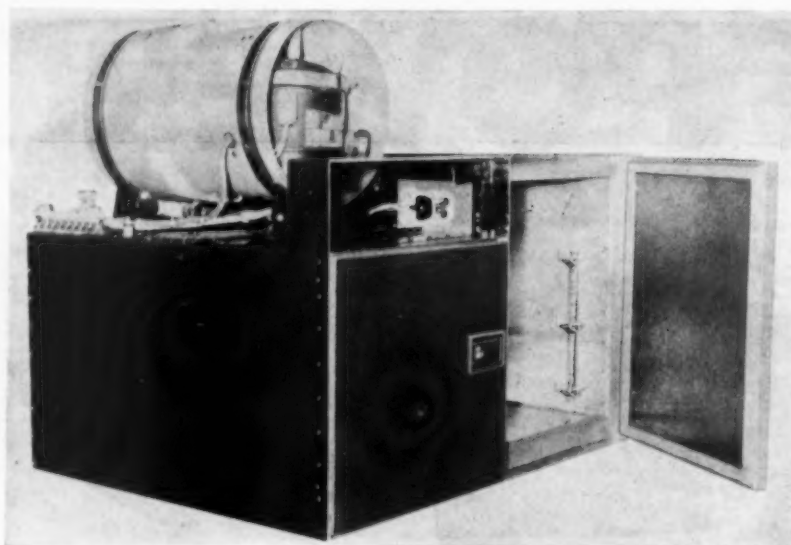
The new RB.141 family of by-pass jet engines is based on seven years' development experience of the by-pass principle gained with the Conway and on six years' operation of other gas turbine engines in airline service. The first of this series has already been chosen to power the new British European Airways medium range jet airliner.

## ROLLS-ROYCE

## ***GAS TURBINES***

**ROLLS-ROYCE LIMITED, DERBY, ENGLAND**

**AERO ENGINES • MOTOR CARS • DIESEL AND GASOLINE ENGINES • ROCKET MOTORS • NUCLEAR PROPULSION**



## Airborne Cooler

Task Corp., Anaheim, Calif., has developed a compact mechanical refrigeration-condensing unit for use in galleys on new jets and turboprops.

The Task unit features considerable weight savings over older types. A Task cooler with a 1/2-hp motor weighs 23 lbs. and does the same work as a previous type weighing 65 lbs.

These refrigerators eliminate the need for using dry ice in certain food storage areas. In Braniff's DC-8 for example, a 45-cu. ft. food storage compartment—normally stocked with dry ice—is being engineered by Task as a top-mounted unit, circulating cooled air through a narrow vertical passage

between separate food storage areas, with thermostatically controlled cooling temperatures. Other units are being designed with "cold-wall" construction, utilizing expansion-channel type wall-cooling plates for Freon circulation.

Task is making 1/2 and 3/4-hp refrigeration units in both vertical and horizontal configurations. These units all feature a hermetically sealed compressor, a condenser with co-axial receiver tank, and a fan mounted between the compressor and condenser. The units are self-contained and are designed for airborne operation with the new jet aircraft standard 3-phase/400-cps/208-v power.

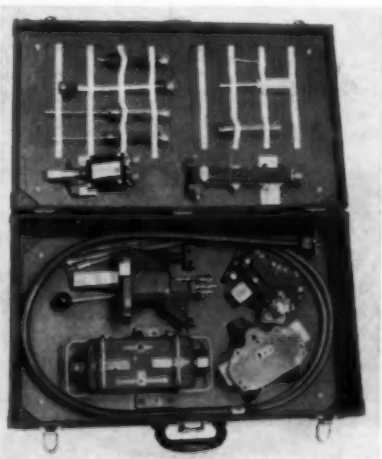
Circle No. 120 on Reader Service Card.



## Inspection Light

Foster Supplies Co., Chicago, has developed a pocket flashlite and inspection kit called the Conduct-A-Lite that fits in the shirt pocket and operates on two standard penlight batteries. It has a Lucite conductor which can be used to see into hard-to-reach areas. Set comes with batteries, 4" and 6" conductors, and a choice of clip-on mirrors. Price is \$4.95.

Circle No. 121 on Reader Service Card.



## Jet Trimming Kit

Lear, Inc., Grand Rapids, Mich., has made a kit for remote trimming of jet

engines. It contains six sets of adapters which permit coupling to fuel controls on nearly 44 types of engines. With the remote trimmer, one man—instead of the usual three—can adjust the idle, maximum power, and water-injection systems from the airplane's cockpit, in full view of all the engine instruments. The kit weighs 35 lbs. and contains 150 ft. of control cable, a servo actuator, a molded flexible shaft cable plus the six adapters.

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## ... Product Briefs

• **Temperature probe**—A new surface temperature probe designed for measuring skin and gas temperatures has been developed by Rosemount Engineering Co., Minneapolis, Minn. Called REC Model 116D, the new probe is especially useful for tailpipe temperature measurements, and in flight test operations. It has a sensor of pure platinum wire of 500 ohms resistance at 0 deg. C, and a 1/16-in. inconel-sheathed lead that can be bent to almost any desired shape. Upper limit of the probe is 760C but can be raised to 1100C in many applications.

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• **Oxygen kit**—Scott Aviation, Lancaster, N.Y., has an oxygen installation kit for business aircraft. The oxygen regulator is installed next to the pilot's station, and five outlets are located overhead in the cabin. The oxygen supply cylinder is usually mounted aft in the baggage compartment. The "President" kit with 48-cu. ft. cylinder will provide oxygen for one person at 15,000 ft. for nearly 12 hrs. and sells for \$295 complete.

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## ... Technical Literature

• **Reusable primary battery**—An illustrated brochure explains the PM Silvercel battery developed by Yardney Electric Corp., N.Y.C. Describes the unusual features of this high-power, high-energy, long-life unit. The battery combines recyclability of the secondary battery, fast activation of primary and the high output of the silver-zinc system.

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• **Temperature-voltage tables**—A chart of temperature-millivolt conversion tables for thermocouples is available from Thermo Electric Co., Inc. Saddle Brook, N.J. This chart makes it possible to convert either Centigrade or Fahrenheit temperatures to millivolt values for eight thermocouple calibrations.

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## PEOPLE

**Lewis B. (Bud) Maytag, Jr.** became one of the youngest airline presidents in the country in mid-January when he took over the reigns of Frontier Airlines, just six months after the CAB approved an interlocking relationship between the airline and Maytag Aircraft Corp. At 32, Maytag succeeds **C. A. Myhre**, who had served as Frontier president for 5½ years. Myhre announced no immediate plans for the future.



Maytag



Kochman

**Marshall D. Kochman** returns to the airline industry after some eight years when he joins American Airlines on Feb. 16 as v. p. of properties and facilities. He fills the vacancy created by the resignation of **George C. Van Nostrand**, who accepted the presidency of North Dakota Nitrogen Co. Kochman was previously with Delta Air Lines and more recently with Montgomery Ward and Co.

**Althea O'Hanlon (Mrs. Leslie Gould)**, a 12-year veteran with Capital Airlines, has been elected asst. v.p. for corporate affairs by the company's board of directors. She becomes one of the few women who have won such a high position in the airline industry.



O'Hanlon



Hage

**Robert E. Hage**, formerly chief of military products preliminary design in Boeing's Transport Division, will add impetus to McDonnell Aircraft's drive to market the four-jet Model 119 in competition with Lockheed's JetStar by heading up the new McDonnell Transport Division.

**Richard S. Boutelle** has tendered his resignation as vice chairman and director of Fairchild Engine and Airplane Corp., thus severing direct responsibilities with the company after 18 years. He moved up to his positions on the Board in mid-December. His future plans have not been announced, but it is anticipated that he will continue with Fairchild in a consulting capacity since he has only about three years to go before becoming eligible for retirement.



## Grounded: Aircraft plus Executive

Grounded company airplanes and lost executive time are among the problems that can be caused by bogus\* replacement parts. An increasing number of bogus parts are turning up in the aircraft and engine spare parts supply channels. Counterfeit parts are difficult to detect. They may look genuine but they can still mean trouble.

As the Flight Safety Foundation, Inc., points out in *The Problem of Bogus Parts*,\* "Another reason for serious concern is that the airworthiness certificate of your aircraft may be suspended or revoked if bogus parts are used in its repair, overhaul or maintenance."

When a Pratt & Whitney Aircraft engine leaves our plant it's as good as we can make it. It's built to stay that way if properly serviced, using replacement parts that are exactly the same as original parts.

You can protect yourself and your aircraft against the problem of bogus parts by buying from the original manufacturer, from his authorized dealers or distributors, or from recognized, reputable overhaul or maintenance agencies.

"The Problem of Bogus Parts," published by Flight Safety Foundation, Inc. A free copy of this informative booklet may be obtained by writing to Pratt & Whitney Aircraft, East Hartford 8, Connecticut, attention: Service Manager.



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## BRISTOL PROTEUS OVERHAUL LIFE

**PROTEUS 705 SERIES ACHIEVES**

# 2,000 HOURS

**IN UNDER TWO YEARS' SERVICE**

**Bristol Proteus first entered airline service less than two years ago. Overhaul life on the 705 series has now reached 2,000 hours—a rate of increase never before achieved by any other engine, piston or gas turbine**

No engine of comparable power in service today has an overhaul life that even approaches this length. Annual engine overhaul costs for BOAC's Britannia 102 aircraft have now been cut by 75% since the aircraft went into service.

**Continued development, even lower fuel consumption.** Further increases will give Proteus even longer overhaul life, entailing even lower operating costs. In addition, new versions of this engine—which already has a lower specific fuel consumption than any other gas turbine in civil or military use—are now giving even more power at an even lower specific fuel consumption.

**Over 2½ million miles a month in world service** Every day, all over the world, Proteus-powered

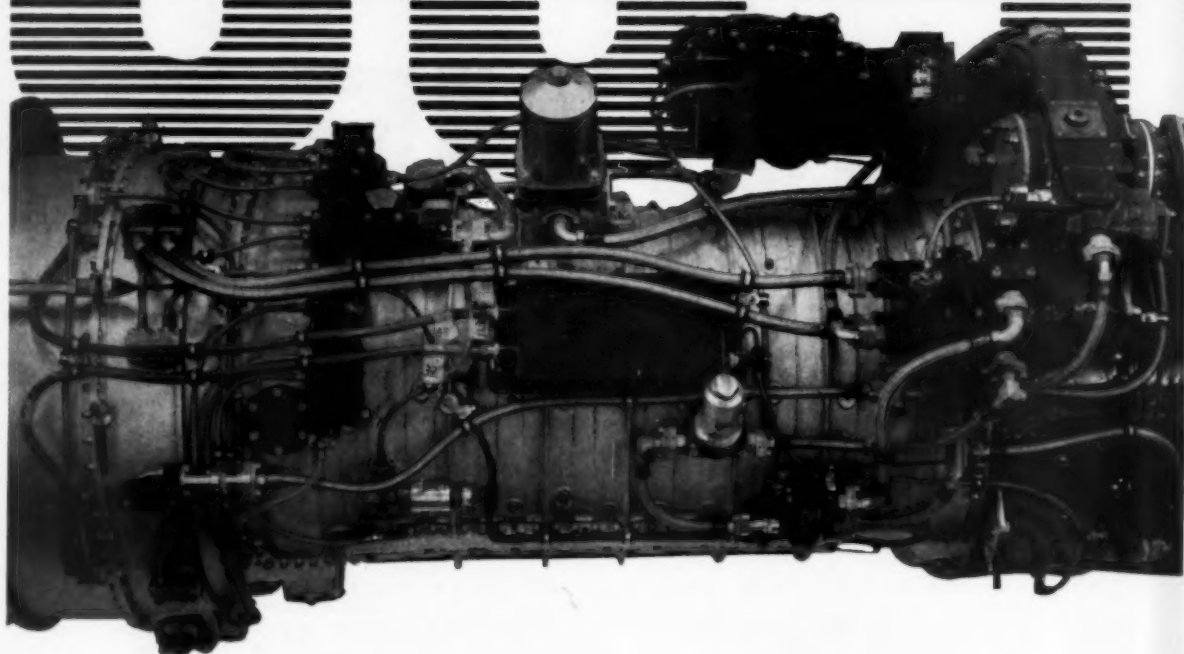
Britannias fly more than 80,000 miles (2½ million miles a month), carrying passengers in quiet, speedy luxury, carrying a great variety of freight loads, and bringing profit to operators.

**Bristol**  
  
**Siddeley**

ENGINES LIMITED

# J34

WESTINGHOUSE



## BENDIX\* IGNITION SYSTEMS—FOR THE BEST IN JETS

Since first produced in 1947, the Westinghouse J34 jet engine has incorporated an ignition system produced by Scintilla Division of Bendix Aviation Corporation.

Here at Scintilla years of experience in ignition manufacture are carefully coordinated with advanced thinking in ignition design. Result: Scintilla Division is a primary source for reliable ignition systems used in finest turbojet and turboprop engines.

The J34-WE-46 shown here, now being produced by the Westinghouse Jet Engine Division in Kansas City, uses a new curvic coupling-type steel compressor, com-

bustion chamber, fuel system and other modifications to permit the use of JP-4 and JP-5 jet fuels. The high-energy ignition system manufactured by the Scintilla Division provides improved air starting characteristics and operation reliability.

Reliability, coupled with serviceability and extended overhaul life, are inherent features of all jet ignition systems designed and built by Scintilla Division of Bendix Aviation Corporation.

Canadian Affiliate: Aviation Electric Ltd., 200 Laurentian Blvd., Montreal 9, Quebec.  
Export Sales and Service: Bendix International Division,  
205 E. 42nd St., New York 17, N.Y.

\*TRADE MARK

Scintilla Division  
SIDNEY, NEW YORK





**Proposed 4½¢ turbine fuel tax** will hit hard in many directions. At Capital it would add \$3.6 million annually to fuel bill for Viscounts. Operating costs of Fairchild F-27 for locals would increase an estimated \$11.50 per hour, up about 10%.

**FAA engine specialists** have dropped any consideration that back pressures from thrust reverser contributed to premature removal by Pan American of first JT3 jet because of turbine failure.

**Look for realism** in FAA's approach to performance rulemaking now that responsibility has been shifted from CAB. Example: Reopening this month by Director of Flight Standards, W. B. Davis, of F-27 rules giving manufacturer and operators the chance to state their case.

**Airlines will cooperate** more closely in negotiations with unions. CAB has approved the six-airline strike aid pact, and although the text of its decision isn't available yet, lawyers don't believe there are any crippling limitations. So airlines are working on the next step, which will probably see one airline consulting with all others in determining its position in labor talks. The carrier may not necessarily be bound by the group's decision as negotiations progress, but the cooperation will be much closer. And more lines are expected to join the strike aid pact.

**Some local service lines** are shying away from writing off new planes, such as the F-27, in 10 years. They want CAB, in rate cases, to allow seven-year depreciation on grounds that they may need more planes in that time and that 10-year proviso might hamper ability to obtain new loans. Also, they favor raising the present \$5 million limit on government-guaranteed loans.

**Pay of the third pilot** on American Airlines' Boeing 707s will be be-

tween \$9,800 and \$11,240 a year. This is the scale for a Convair co-pilot, and new AA-ALPA contract says the third man will be in this bracket. (See p. 18.)

**Less paperwork and faster baggage handling** procedures will result if Federal Aviation Agency allows airlines to use average baggage weights in loading planes. Airline survey of 32,000 flights and 900,000 bags showed average checked bag weighs 23.5 lbs., that 5 lbs. per person is average for cabin baggage. They've asked FAA's okay to use these figures. Agent would simply count bags and consult chart to determine total weight for loading purposes. Number of passengers multiplied by five would give cabin baggage weight. Passenger's luggage would be weighed only to see if it exceeds 40-lb. allowance. Average passenger weights have been used for several years. Airlines say new system would need less agents, result in substantial salary savings.

**It hasn't been announced yet,** but Allegheny Airlines has bought four Martin 202As from TWA, has an option on three and first right of refusal on four more. This covers TWA's entire fleet of 11 202As. Allegheny already has three of the planes in service.

**American Airlines' domestic jet lead** is expected to boom its transcontinental freight and mail loads. Same-day delivery of westbound freight may be possible in some cases. And this month, new jet trip will leave Los Angeles at 11:30 p.m., reach New York 7 a.m. All mail from close of the business day could be held for this trip and reach east coast faster than on earlier piston-engine departures.

**Strong local press support** enjoyed by Port of New York Authority has hit the skids. Reason: Ill-advised press and public relations policy that dominated its handling of jet noise program.

**Upwards of eleven Boeing 707s** (or DC-8) will be departing from one airport within a half-hour period in the next 18 months at some locations. With each jet seating from 125 to 155 passengers, this means 1,200 to 1,500 passengers, along with friends to see them off, will be converging on the airport during the hour or more prior to the scheduled departure. Forecast is based on peak daylight hour traffic patterns developing, as seen by the Airline Ground Transportation Association, from projected airline scheduling of aircraft. AGTA estimates that ground transportation companies will need to prepare to handle from 300 to 450 or more of these passengers during a half-hour period.

**Some 30 jet climb corridors** will be added to the 10 now in use at Air Defense Command bases around the country, according to plans announced by the FAA at press time. The wedge-shaped corridors, which are also restricted areas, are two miles wide at the entrance, which begins five miles from the airfield at an altitude of 3,000 ft., and four and one-half miles wide at the top, 32 miles from the airfield at an altitude of 32,000 ft.

**More "free" airspace** is promised under an amendment to CAR 60-14 to take effect Jan. 1, 1960. Present floor of control areas for enroute traffic will be raised from 700 to a minimum 1,500 ft., and minimum separation between IFR aircraft and VFR flights operating beneath, from 300 to 500 ft. To give the FAA flexibility in the handling of airspace matters meantime, a provision has been included permitting the FAA Administrator to implement any part of the amendment prior to its effective date where practical to do so.

**Three-year-old Beaufort (S. C.) airspace dispute** has been temporarily

settled. The case, involving the Beaufort Marine Corps Air Station, is the first major airspace dispute to be decided by FAA Administrator E. R. Quesada. Victor #3 and Amber #7 will be rerouted west of the base and a new offshore airway, to be known as Victor #1, will be established. The decision, effective Feb. 12, also establishes a temporary joint-use Restricted Area directly over the Air Station until Dec. 1. The Restricted Area northeast of Beaufort is being eliminated.

**Airport operators and users** testifying on S.1 would like to see, among other things, (1) action by Congress, if need be, to effect some kind of a halt to continued "upping" of existing runway requirements and maximum airport capabilities; (2) development of a supplemental system of airports to serve feeder airlines; (3) stimulation of airport development on a regional basis.

**Big jump in general aviation activity** accounted for most of the 11% increase in aircraft activity reported by FAA air traffic control towers for fiscal 1958 over 1957. Of the top 25 ranking airports in total aircraft movements (air carrier, general aviation and military), 13 recorded more landings and takeoffs by general aviation than by air carrier aircraft. Phoenix, 11th in rank in 1957, jumped to 4th place, with general aviation accounting for roughly 70% of total. Austin, Tex., shot up from 50th place to 25th almost entirely on the strength of a better than 50% rise in general aviation activity. Figures are reported in "Federal Airways Air Traffic Activity for Fiscal 1958." Also out is 1958 edition of "CAA Statistical Handbook of Civil Aviation." Both publications may be obtained from the Supt. of Documents, Government Printing Office, Washington 25, D.C., at 45 and 55 cents a copy, respectively.

# How To Treat A Sick Airline

*When George L. Giles stepped in as president of Riddle Airlines last February 15, the Miami-based all-cargo airline was losing at the rate of \$285,000 a month.*

*Riddle was a pretty sick carrier. There were many who wondered how it could continue for long. Nobody envied Giles.*

**By Wayne W. Parrish**

But the doubters reckoned without the calm determination of this aeronautical engineer and business man. He had never run an airline before but he's performed a near-miracle in less than a year. How he did it makes one of air transport's interesting stories.

Here are the steps he took:

1. Eliminated all activities such as manufacturing which didn't contribute to cargo. (Sole exception was military.) He set a new policy that Riddle was certificated for cargo and that's what the primary job should be.

2. Cut nonflying personnel by 25%, and flying/operations personnel by 44%, giving a payroll reduction of \$100,000 a month. Employment is now about 600 from a high of 1,000.

3. Reviewed all accounting procedures, including Riddle's unique teletype system by which stations make out waybills and invoices by teletype into the main office. Changed the system so accounting machines were given additional loads to handle.

4. Established a monthly budget for headquarters and for each station and set up a profit and loss system to notify each station of comparisons.

5. Set up a system control so Giles would be furnished each morning with a profit and loss statement, thus giving management a means for determining the market and operations.

6. Obtained an \$86,000 reduction in the airline's fuel bill by re-doing the contract.

7. Reduced aircraft maintenance from \$57 per flying hour to \$34 per hour.

8. Trimmed indirect costs by more efficient ground handling. This item is now running at \$135,000 a month but Giles believes it should be \$85,000 a month with a more efficient airplane. More on this later.

9. Doubled revenue from a low of \$400,000 last March to \$800,000 a month. In December, 1958, the line carried over 6,453,779 pounds of cargo,

a new high except during the Puerto Rico strike in 1957.

10. Crew utilization rose from 78.1% to 95.1% in 1958.

It took a lot of hard work and hard-boiled decisions, but the results are apparent. The \$285,000 monthly loss is now down to \$95,000 per month. Revenues have climbed up, costs have gone down. And today Giles has gotten his total expenses down to 24¢ a ton-mile. That's within three cents of the total revenue of 21¢.

And that three-cent margin is about as close as Riddle can get now to a break-even. Under such circumstances one might figure that Riddle should fold up if there's no chance of a profit.

But Giles is firmly convinced that Riddle *can* make money. The handicap is equipment. The C-46 simply isn't a money-making airplane and he can produce some pretty convincing arguments to show that a more efficient type will produce the desired results in profits.

Giles is also a firm believer in the need for all-cargo carriers. He believes with the right equipment, all-cargo carriers can compete profitably against consolidated passenger-mail-cargo lines, and he also has a firm conviction that cargo is never going to be developed rapidly in this country without carriers devoted exclusively to that job.

Currently Riddle has 26 domestic stops and four in Puerto Rico. Its route pattern is a kind of "V" from Miami, with one important segment reaching to New York, and the other northwest via Atlanta to Chicago and Detroit and other industrial cities. But most important in the market pattern is the service from San Juan to New York and Miami, overlaying the general domestic pattern.

It has 34 C-46s and 2 C-54s, the latter being on the San Juan route.

Giles found out early that no matter how efficient you become, the C-46 simply can't do the job. It is not only too costly, it's too small. So he started looking around for better equipment. He found nothing in the U.S. that made any sense for Riddle's routes, and he's quite opposed to converted passenger planes because of the high side-loading problems.

So he looked over the plane market in Europe and found the Armstrong-Whitworth 650, the Argosy, and imme-



**GILES AND TEAM.** Standing (L to R) are O. F. Soucy, general operations manager; R. D. Mires, personnel manager and C. K. Miller, material control supt. Seated: Charles L. Hood, v.p.-sales & traffic; Giles; E. T. Thompson, Jr., Sr. v.p. & treasurer and Norman H. Golden, v.p.-maintenance & engineering.



diately became enthusiastic. He believes the Argosy will change the concept of cargo. More speed will make possible daytime handling and round-the-clock operations. He thinks poorly of the idea that cargo must be only a nighttime operation.

Sometime in October Giles hopes to have an Argosy demonstration airplane placed on Riddle's routes for a 90-day to 6-month period. He has made no commitments for purchasing, but there is no doubt that he considers the Rolls-Royce Dart-powered Argosy the best type available and he wants to prove it out in actual operations.

If he wants to buy the Argosy, it's \$1.5 million delivered in Miami, including import duty. Armstrong-Whitworth is offering good terms—10% down and no payments until the second year and over a six-year period.

The Argosy has a gross loading of 27,000 pounds as against 13,000 for the C-46. It has a cruising speed of 300 mph as against 186 mph for the C-46. It is claimed to have a direct operating cost of 9¢ or 10¢ per ton mile versus 15.6¢ for the C-46. This is the edge Giles is counting on to turn the trick for Riddle. There is no doubt that the Argosy demonstration will stir up a great deal of interest.

Giles likes the Argosy for more reasons than lower costs. He not only likes the loading at each end and the truck-height loading level, but he favors the reversible tie-down floor panels. He believes that if cargo rates are to come down they must come down in the area of indirect costs—handling and loading. Passenger-transport conversions simply won't work.

## Katy Catches On

Riddle's sales program features a kangaroo (a live mascot, Katy, shown here, is on display at headquarters) and the slogan TNT (Tonight Not Tomorrow). The identification of the kangaroo with Riddle has caught on and is carried out through letterheads, decals, billboards and the like.



He believes his petition to the CAB to remove the nonsubsidy restriction from all-cargo carriers was misunderstood. He says he doesn't want subsidy but says the iron-clad nonsubsidy and no-mail restriction in the all-cargo certificates is a handicap in financial investing circles.

Giles is a graduate of the University of Michigan with an aeronautical engineering degree. He worked with Curtiss-Wright and with Bell before World War II. Then he went to China with Bill Pauley's Intercontinent Corp. from 1939 to 1949, building aircraft factories and bases. He also had a lot to do with the founding of Hindustan Aircraft in India. Then back to Cuba working for Bill Pauley, and later with the Department of Defense in charge of all construction for NATO in Europe.

Arthur Vining Davis, the aluminum tycoon who has vast interests in Florida, tapped Giles for the Riddle spot. Davis is principal stockholder in the airline

with some \$4.5 million of his own money invested to date. Davis continues to have faith that the all-cargo line can make the grade.

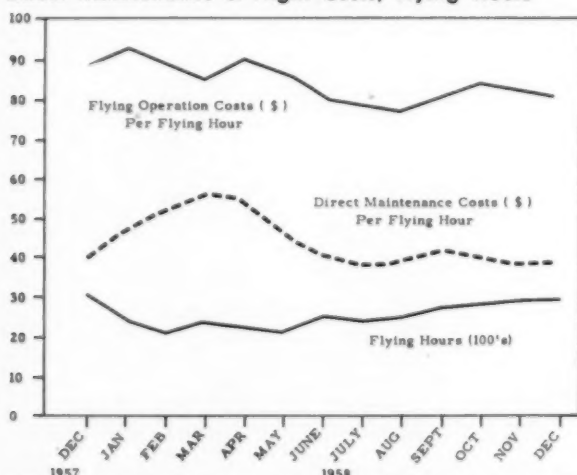
Giles brought only two men into the line, one being Ed Thompson, Jr., executive vice president, formerly with Ryder Systems, and the other C. K. Miller, material control superintendent, formerly with Intercontinent Corp. All of the other top people had been with Riddle.

"Riddle began as an all-cargo experiment," Giles says. "Up to now 216 million ton-miles of cargo have been carried by this one airline with private capital and to me it is no longer an experiment."

"I believe the all-cargo carriers should have the same rights as the combination carriers. I have faith in mass cargo, dealing in pounds and not so many rates. Cargo can only be developed by all-cargo carriers and we can survive profitably with better equipment despite competition from the combination airlines."

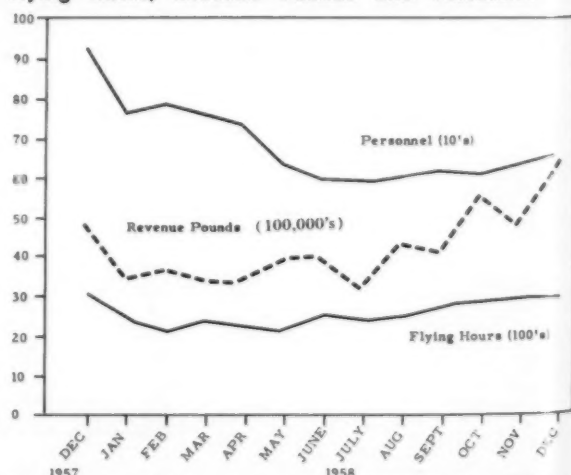
Giles believes the future of air cargo is wrapped up in coordination of air and surface. The airlines serve only major stations, but the trucks offer a wide sweep of the market and a door-to-door service instead of an airport-to-airport service. Thus Riddle is tying its future with links to trucking companies. In January Riddle filed a joint tariff with Great Southern Trucking Company to provide for movement of commodities from Puerto Rico to Miami by airline and by truck to southeastern centers. The joint tariff is compatible with existing sea-truck tariffs.

Direct Maintenance & Flight Costs, Flying Hours



Riddle has produced a 10% reduction of flying operations costs in a year, while direct maintenance costs have been brought into line and were \$39.29 per flying hour in December, 1958.

Flying Hours, Revenue Pounds and Personnel



Flying hours reflect a decrease from 3,018 in Dec., 1957 to 2,807 in Dec., 1958. During this same period, pounds of cargo handled rose 24% to 6,453,779 in December, 1958.



# Airlines Gird to Fight New "Charge-it" Plans

## Encroaching pay-later schemes force carriers to revitalize 22-year-old credit system

By Selig Altschul

The widespread extension of credit arrangements by special organizations and hotel systems which encourage the "charge-it" approach has inevitably moved into the airline field.

The scheduled airline industry, well aware of this threat, is making some major changes in its credit setup, the Universal Air Travel Plan, so that it may have wider utilization and avoid being superseded by other arrangements (See p. 42).

Air travel cards have long played an important role in promoting passenger traffic gains among the scheduled airlines. It is known that an important percentage of the industry's gross passenger business is being transacted under this convenient charge account arrangement.

Air travel credit cards are a great convenience to businessmen doing considerable flying. The carrying of large sums of money to pay for transportation is avoided. A deposit of \$425 is necessary to obtain an airline credit card for a subscriber and covers one or more individuals.

First introduced in 1936, these credit cards have also simplified the detail for accounting and treasury departments which formerly had to keep many individual travel records and advance cash to individuals making trips. The utility of these cards has also been broadened considerably in recent years. The largest car rental companies have been honoring air travel cards for credit. Moreover, hotel chains and other organizations have also accorded the charge privileges to airline cards. Of course, the spread of other general credit groups has minimized the value of the UATP in areas other than for airline travel.

While the UATP has been and remains a potent sales instrument, that is not its only importance to the air carriers.

At the outset of the plan, more than twenty years ago, there was strong reason to believe that the deposits were urgently required as a source of working capital to many airlines. Funds obtained in this manner are interest-free and bulk very importantly in the operation of an airline.

While the need for this particular type of capital is less urgent today than it was at the outset, funds from this source continue to represent a substantial element of support to current airline operations.

An exclusive survey shows, in the accompanying table, the amount of air travel plan deposits for the individual U.S. airlines. The relative importance of this source of funds varies among the separate airlines.

TWA, for example, with a net working capital of \$5.2 million at the 1957 year-end had almost 70% of this amount tied up in credit deposits. United, with the largest absolute working capital, \$40.8 million, had but 15.6% of this fund in credit deposits.

Another major source of capital, but peculiar to all forms of transportation, is derived from "unearned transportation revenues." This represents advance bookings, unused return portion of roundtrips, and other similar forms of services sold but to be fulfilled at a later date. In effect, this becomes a revolving source of funds contributed on a continuing basis.

These balances, for many of the carriers, represent amounts even greater than those available through credit deposits.

Variations appear in the relative importance of unearned transportation revenues in their contribution to working capital balances of the separate carriers. This is indicated in the accompanying table. But taken together, air travel deposits and unearned transportation revenues are vital to some carriers—their removal can become outright critical for a number of the airlines.

It is noteworthy that in its far-flung world-wide operations, Pan American last showed unearned transportation revenues of around \$22 million, almost three times the amount of its net working capital.

Unearned transportation balances are particularly significant and subject to quick recall in the event of temporary suspension of operations due to strikes. And the industry has had more than its share of these stoppages in recent times.

Interestingly enough, it is known that some years ago when a major U.S. international airline was shut down by a pilots' strike it lost more than \$3 million in cash as redemptions were made for advance bookings.

There can be no doubt that the UATP has been of great value to the air traveler and the airlines as well. Many UATP subscribers run up gross billings substantially in excess of their nominal deposit so that they are being "carried" by the airline in a credit sense and not the other way around.

### Air Travel Plan Deposits

(AS OF DECEMBER 31, 1957)  
(IN THOUSANDS)

	Air Travel Plan Deposits	Unearned Transportation	Net Working Capital	ATP % of Net Work Cap.
American .....	\$ 9,857	\$ 6,956	\$35,240	28.0%
Braniff (1) .....	674	1,304	8,972	7.5
Capital (1) .....	906	631	1,701	53.3
Continental (1) ..	141	233	2,880	4.9
Delta (2) .....	1,071	3,141	5,751	18.6
Eastern .....	4,701	12,914	35,058	13.4
National (2) ...	296	846	5,544	5.3
Northeast .....	...	686	27	...
Northwest (1) ..	1,122	764	4,407	25.5
Pan American ..	...	21,955	7,501	...
TWA .....	3,652	5,794	5,253	69.5
United .....	6,365	8,480	40,799	15.6
Western (1) ...	316	676	2,812	11.2

#### NOTES:

- (1) As of September 30, 1958
- (2) As of June 30, 1958

#### SOURCE:

Company Statements

## Dressed-up New Air Travel Cards To Have Wider Business Appeal

By Eric Bramley  
Chief News Editor

A brand-new air travel card will be issued this year.

Not only will it be more attractive in appearance, it will be more attractive to firms other than airlines—car rental companies, hotels, etc.

It's a safe bet that cardholders will be able to use the new card to obtain credit on more items—and thus the impact of other credit plans will be softened.

Although an official count hasn't been announced since early 1958, the Universal Air Travel Plan, sponsored by Air Transport Association's Air Traffic Conference and by International Air Transport Association, has some 90,000 subscribers and 900,000 cardholders. The cards are honored by 112 airlines.

The airlines claim that, as of right now and even without any changes, it's the best credit plan available. Losses

are less than ½ of 1%. This is attributed to: (1) a thorough credit check, (2) the \$425 deposit required of each subscriber (for which he can issue any number of cards).

At present, the card's use is somewhat limited. In an airline office, you can't buy everything with a card that you can buy for cash. You can purchase air tickets and pay for excess baggage. You can't, for example, buy a package tour or pay for baggage that you might want to ship via airfreight. Chances are that use will be broadened to include such items. Other possibilities: inclusion of combination air-sea trips, and car ferry.

The present card, made of heavy paper enclosed in an acetate folder, has a metal plate on which is a code number, cardholder's name and company—but no address. The new one will be plastic and in embossed letters will carry code, name, company and address.

The airlines are not going to the

trouble—and considerable expense—of reissuing 900,000 cards just to have a prettier, more modern product in the customers' hands (in addition, carriers would have to rent or buy new ticket counter imprinter machines to handle the new cards, which are being obtained from Farrington Manufacturing Co., Needham Heights, Mass.). Rather, the complete information on the card will make it easier for outside firms to use it for credit and thus broaden its use.

Although there have been no formal agreements with airlines, large car rental companies, some hotels, restaurants, etc., have allowed customers to "charge it" with UATP cards. Billings are direct to the purchaser—not through the airlines.

Whether the carriers will actively merchandise the card—actually put on a campaign to obtain more outside users—remains to be seen.

The modified card will be introduced on Aug. 1 and on Sept. 30 the carriers will cease honoring the old card.

American Society of Travel Agents has told ATC and IATA that "certain types of credit cards" are of "grave concern" to it because they require agents to "pay for consumer's credit." It requested airlines not to honor these and asked that UATP be made commissionable to agents domestically as it is internationally.

Despite ASTA's opposition, there are reports that some 160 ASTA members have signed up with Amexco. And, as plans such as Amexco and Diners expand—backed by aggressive advertising—the possibility looms that they will detract from UATP. The new airline card will offset this.

A company using one of these other plans pays a fee per year per card. UATP deposit is \$425 for the life of the plan and is refunded when the subscriber cancels. Thus, UATP is more economical, airlines say.

No commission is paid to travel agents for domestic tickets sold under UATP (they receive 5% on cash sales). Internationally, they get 7% on tickets, 10% on the air transportation portion of package tours. Despite ASTA's urging, it seems unlikely that the carriers will be willing to pay 5% on domestic UATP sales—the argument has been made that such sales by an agent represent an "interception" of business that the airlines should handle directly. However, one possibility that has been discussed is payment of 10% on the transportation portion of domestic tours, as an incentive to agents to concentrate on this market.

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## CAB Report and Forecast

### Solid on Electra

#### Western still cool on jets for 500-mile hauls

Western Air Lines will start taking delivery this summer of the nine Lockheed Electras it has on order, but its future plans center more on the disposal of some of its present older equipment than they do on heavy financial commitments for the purchase of straight jet aircraft.



DRINKWATER

The company has three additional Electras on order and President Terrell C. Drinkwater is confident that this turboprop fleet will give WAL a solid equipment advantage on the West

Coast. "We expect to capitalize on this to the fullest," he says.

The company has not decided how long it will be before it places an order for turbojets nor has it come to any obligational conclusions as to which aircraft it will order. "We will proceed with some caution in this area," Drinkwater states, and adds that WAL has not been convinced by any manufacturer that a "pure jet" can be profitable for 500-mile stage lengths.

Regarding reports that WAL is in agreement on the purchase of Boeing 720s, Drinkwater reiterated that no decision has yet been reached, adding that nothing will be done in this direction until financing has been arranged. He stated that all of the Electras are financed through long-term insurance loans and short-term loans and that the company contemplates no equity financing in 1959.

Regarding the disposal of some of its older equipment now in service, Western's president explained that the company's management takes the viewpoint that the carrier's equipment situation is just about right. It has 27 Douglas DC-6Bs, six Convair 240s and two Douglas DC-3s. It will dispose of the DC-3s after completing the transfer to local service carriers of the short-field points which now require smaller aircraft. The transfers are being made under recent CAB rulings.

Western will eventually dispose of the Convair 240s. When it has completed all of its transfers to local service carriers, the company will have only one point on its system (Helena, Mont.) that is inadequate for DC-6B operations.

Question of a higher fare for jets has the Board thinking in circles. Past

policy of the CAB has been to approve tariffs based in many cases on differences in value of service. In one past instance the Board took the view that a surcharge for DC-6 aircraft should not be removed. There are other more recent rulings in favor of differentials.

Yet the Board felt it necessary last September 4 to issue a policy statement on jet fares which in effect said that no surcharge for the faster, more comfortable service would be approved. Idea behind the statement was to give advance notice of the Board's views so they could be taken into account by the airline representatives meeting last Fall in Cannes at the IATA traffic conference. Main effect of the CAB's statement was to help deadlock the conference, even though a large majority of the carriers favored a surcharge. A second session of the traffic conference has now been scheduled for Feb. 16 at Paris.

In the meantime, the Board has apparently changed its policy. American Airlines brought the issue to a head by filing a tariff for their new transcontinental jets that is higher than the charge for competing piston-engine air-

craft. On Jan. 16 the CAB approved the surcharge for first class seats and denied it on the coach seats. Then, Jan. 22, on petition for reconsideration, the Board approved the surcharge on the coach seats.

• **Seats are a problem** to the Board in many ways. TWA's Siesta Sleeper Seat case continues to defy efforts to settle it for once and for all. And the Board has now taken a broad-brush approach to aircraft seating by ordering a full-scale investigation "into the seating configurations which the domestic trunkline industry currently utilizes or plans to utilize for each of the various classes of service."

• **Board shorties** . . . Hearings begin April 14 in the Southern Transcontinental Service case, the first CAB jet era route proceeding . . . Examiner Wiser ain't saying nothin', but optimists still insist his initial decision in the General Passenger Fare Investigation may be out before April 1 . . . The Postmaster General has cut the number of his assistants entitled to free airplane rides from 49 to 41.



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Circle No. 6 on Reader Service Card.

## WEST COAST TALK

By Fred S. Hunter

Every time the subject of Palmdale comes up, we think of Bill Wilson's experience. Now purchasing agent for Lockheed's California Division, Wilson was on a public relations assignment at the time Air Force Plant 42 was being set up for jet aircraft at the former Los Angeles County Airport. Wilson was a frequent visitor to Palmdale and in connection with this work became on friendly terms with a Palmdale real estate man, who one day suggested that he snap up a corner lot then available for a mere \$8,000. Wilson was too busy with Lockheed problems to be interested in real estate speculation and passed up the opportunity. Shortly thereafter the real estate came around again. Price of the lot had gone up to \$14,000, but it was still a money-making buy, Wilson was assured. "If I wouldn't pay \$8,000 a few weeks ago, why should I put up \$14,000 now?" asked Wilson. Later the Lockheed executive was given a third opportunity to buy this parcel of land; this time at \$22,000. So what finally happened? A bank, needing a parking lot for its customers, laid \$40,000 on the line to buy it.

• **Diminishing production**—Palmdale is less of a boomtown now, although some real estate men and other promoters, who saw it expand almost over night from a wide spot in the road into a bustling community, continue to whoop it up and keep pestering the aircraft companies as to their future payroll prospects. Recently the Sacramento Air Materiel Area took a reading and found that, on the basis of current contracts, a decline of 44% can be expected to take place between now and the third quarter of 1960. There are, however, projects in the works that may tilt the figures upward. One is the Northrop T-38 jet trainer. Northrop, at one time, had Palmdale's biggest payroll, but it departed from the scene with the end of production on the F-89 interceptor.

• **New boom?**—Down the road is North American Aviation's assembly and flight-test program on the B-70 chemical bomber. At this writing, NAA has not received the actual

Phase-2 contract on this high-performance bomber as it has on the F-108 long-range interceptor, but it should be forthcoming momentarily. Phase 2 will be prototype production plus a certain amount of work toward the production of long, lead-time articles. The big payroll will come with Phase 3, which will call for aircraft for the inventory. This could mark boom No. 2 for Palmdale.

• **Boom No. 3?**—Ray Allen, Los Angeles Chamber of Commerce transport manager, projecting a vast expansion in air traffic in the next 25 years, thinks the Antelope Valley may be the logical location for a secondary international airport for the Los Angeles area. It is on the other side of the mountains where visibility is clear practically 100% of the time. Such an airport, as envisioned by Allen, would cost \$85 to \$90 million, employ as many as 9,000 people, and handle 100 million passengers within the first 20 years of its existence.

• **Top executive**—The line of succession at North American Aviation has been established by C. J. Gallant's appointment to the new post of executive vice president. The former general manager of the Columbus Division also will be elected to the NAA board at the annual meeting on February 26. Like Chairman J. H. Kindelberger and President J. L. Atwood, Gallant is an engineer.

• **Big lifts**—Now that MATS has accomplished an official record by airlifting 117,900 lbs. of payload in a Douglas C-133 turboprop, Boeing comes along to report that a KC-135 from Loring AFB recently transferred more than 140,000 lbs. of fuel to a B-52 in a single refueling mission. . . . And we've just discovered that the first Boeing motion-picture unit man to exceed the speed of sound in a TF-102A chase-photo plane was cameraman Jack Jett. ("Honest, that's his name!" says Boeing's Elmer Vogel.)

• **Jet costs**—Maintenance department of United Air Lines will spend approximately \$190,000 in 1959 on training employees in preparation for jets.



## Transport Briefs

• **First Comet 4** for Aerolineas Argentinas has rolled out at Hatfield ahead of schedule. Three will be delivered in time for start of service to New York and Europe this spring.

• **Trans World Airlines** has won a stay of CAB's order requiring that a 20% surcharge be charged on siesta-seat service or that the service be discontinued. Board questions whether charging first-class fares in present configuration is unlawful.

• **CAB's decision** in the Large Irregular Carrier Investigation is causing much consternation among both scheduled and supplemental carriers. There are indications that some carriers may take the decision to court.

• **National Air Taxi Conference's** complaint to CAB has resulted in the Board issuing a petition for enforcement and instituting an enforcement proceeding against Hertz Rent A Plane System.

• **National Airlines** cited its 90% load factor for Boeing 707 flights in answer to Eastern's complaint that advertising of six-abreast seating as first-class service is unfair and misleading. National says the seats are wider than in normal coach service and are designed to provide more leg room.

• **Brazil presented a program** calling for specific tariffs for different services offered as an answer to the rate-war in the Latin American area. Recommendations are being studied by a Tariff Committee appointed at the recent meeting of the regional civil aviation conference in Rio de Janeiro.

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## EXCITING NEWS

See Page 28



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First of a New Series

# Two Haircuts in Russia ... First Stop Warsaw

Want to go with me again to Russia? If so, hang on.

Those of you who were reading this page in 1956 will recall the series "Russia Between Haircuts" following a two-week trip behind the Iron Curtain in late November and early December, 1955. That was a short jaunt, a very cold one, very depressing and between haircuts.

Why did I want to go again? Well, there were a number of reasons. I was going to the IATA meetings in New Delhi, India, so why not take an interesting route; I wanted my wife to see the place; I was curious about changes that might have taken place; I wanted to fly the Russian jets; and such new areas as Siberia and Central Asia had been opened up to tourists.

So after taking in the Brussels fair and seeing a lot of things in the Soviet pavilion which I had never glimpsed inside Russia, my wife and I took a Sabena DC-6 to Amsterdam and transferred to a KLM Convair for Warsaw, Poland. Our itinerary as far as Afghanistan had been worked out with that old USSR travel expert, Gabriel Reiner of Cosmos Tours in New York. The time: last October.

It was a fine, clear fall day when our Convair followed a very precise and out-of-the-way route north over southern Denmark, skirting East Germany with ample margin, and headed south from the Baltic by a zigzag course to Warsaw. We approached from the west to the airport southwest of the city. In the late afternoon sun was big, sprawling Warsaw with that 30-story wedding-cake Palace of Culture, the "gift" of the Soviets, towering over everything else in the city.

Never having been in Poland before, I was unprepared for several things. One was the frankness of the Poles with whom we came in contact who openly criticized Russia. We hadn't been on the ground ten minutes before the caustic cracks began coming forth. The second surprise was the relatively-well dressed Poles in Warsaw, much better dressed than the Russians. There was a liveliness in the city I hadn't expected. There were more (and better) goods for sale than I had thought possible.

Poland has a government tourist setup called Orbis. It arranges hotel accommodations and transportation and is supposed to give guidance to visitors. In

contrast to the well-regimented Intourist of Russia, Orbis is not well organized, although we were met by a personable and attractive gal who got us through customs and to the Bristol Hotel in double-quick time. There are no few good-looking gals in Poland, incidentally.

The Poles are sandwiched between Russia on the east, Czechoslovakia in the south and East Germany on the west. If they had an outlet to the west they'd get out from behind the Iron Curtain in one day. A good 90% are pro-west. What with the many family connections in the U.S., Americans are very popular.

How many divisions the Russians have in Poland is debatable. One good source said two, another five or six. But they are all segregated. Russian soldiers aren't seen walking around. I was told that a Russian soldier walking in the streets of Warsaw at night would have his throat cut so fast he'd never know what happened. The armed might is there—but there's no mistaking the feeling of hatred by the Poles.

Although goods are more plentiful than a few years ago, prices are high. A good pair of women's shoes costs a month's white-collar salary. But I was surprised at the number of cars and at such U.S. products as Palmolive and Lux soap, canned orange juice, Maxwell House coffee, etc., on sale at the various state stores. And there is a growing number of private enterprise shops. Churches are open and well-attended—the Communists have failed to stamp out the Catholic Church in Poland.

The Bristol was one of the few buildings in downtown Warsaw not destroyed by the war which knocked out about 90% of the city. Service is poor. The wash-basin sink drain was badly stopped up. The bidet leaked. Hot water was a rarity. The beds were hard. In the dining room the service was very indifferent and it was difficult to find out what food was available. One end of the hotel was "bugged," and we, of course, along with almost all western guests, were put in that wing. Despite the feelings of the average Pole, the government is still Communist in fact as well as in name.

Bread was excellent, so was most of the meat, in particular the wonderful Polish ham served for breakfast. Coffee was served in glasses and not too bad. There's a service charge on all the bills but you're expected to tip anyway—the



Photo by Wayne W. Parrish

The Soviet "gift" to Poland, the "Palace of Culture," called by the Poles "a drunken baker's dream" among other things. It is of not much use except for several theaters.

waiter, the taxi driver, the doorman, and so on. There are plenty of taxis and the rates are low. Gift parcels from the U.S. play an important role in the economy and a lot of the gifts find their way into the black market.

There are horses and even horse-drawn carriages in Warsaw. Quite nostalgic to be drowsing in bed and hearing a horse and carriage moving over the cobblestones on an otherwise quiet night.

One night we went to the Krokodil night club with some friends. It's in an underground wine cellar, rebuilt since the war, and rather picturesque. Food pretty fair. Several athletic Poles got the orchestra to play some of the old-time polka music and in a matter of moments the floor was filled with dancers going through those hectic whirlwind motions.

Times are a little better, but the Poles have had rough going. The stories of what both the Germans and Russians did to Warsaw are hair-curling. The privations, suffering and poverty were enormous. But the Poles have come through before and they're doing it again. But they have no way out of their dilemma at the moment.

An Orbis representative took us to the airport to board a 24-passenger Aero-Flot Il-14 for Moscow. Departure was about noon. There was a lot of delay in the poor terminal getting passports fixed up and baggage weighed and cleared. The flies were bad. I had to pay a rather hefty excess baggage charge, and spent the rest of my Polish currency on chocolate bars, soap and such items in the terminal shop.

We boarded the Il-14, took rear seats, found that we had seat belts that worked, and took off for Vilnius, an old city in the eastern part of what once was Lithuania, where we were to stop for lunch. (There's no food service on the Russian Il-14.) Vilnius is also the port of entry to the Soviet Union on that route, about an hour and a half north and east of Warsaw.

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# Aircraft Data Cards

Aircraft selected for the data card series in this issue are Convair's 600, North American's A3J-1 and Beechcraft's MS 760 Paris.

The 600 is a slightly larger development of the Convair 880. Features of this commercial jet transport are high speed capability and low cost per seat mile.

North American's A3J-1 is a supersonic, all-weather, carrier-based

attack weapon system. Currently being evaluated by the Navy, it can deliver conventional and nuclear weapons at both high and low altitudes.

The MS 760 Paris is a four-place executive jet manufactured by Morane Saulnier of France. It is marketed in the U.S. by Beech, which also has the U.S. manufacturing rights.

## CONVAIR 600



Aircraft Data Card  
February 9, 1959

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## NORTH AMERICAN A3J-1 VIGILANTE



Aircraft Data Card  
February 9, 1959

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## BEECH MS 760 PARIS



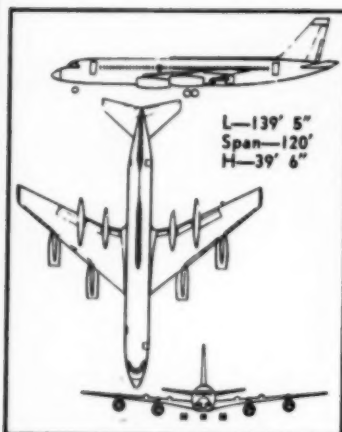
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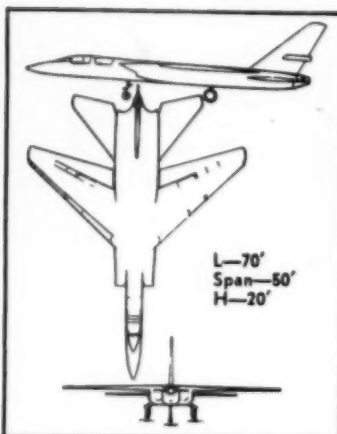
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### CONVAIR 600

TYPE: 96-121 passenger, 4-engine commercial jet transport. WEIGHTS: empty—149,000 lbs.; payload—25,120 lbs. to 29,245 lbs.; gross—238,200 lbs. POWERPLANTS: (4) General Electric CJ805-21s; rating—approx. 15,000 lbs. st. each. PERFORMANCE: max. cruise speed—635 mph; range—4,400 mi. with 15,110 gal. fuel capacity; takeoff distance—5,000 ft.; landing distance—4,650 ft. MFR: Convair Div. of General Dynamics Corp., San Diego, Calif.

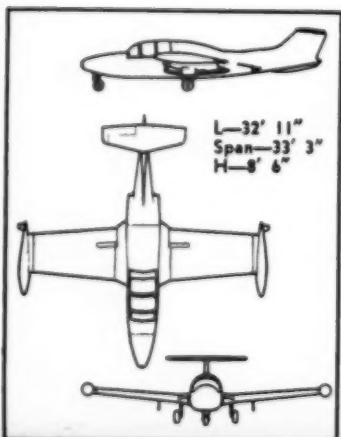
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### NORTH AMERICAN A3J-1 VIGILANTE

TYPE: 2-place, twin-jet carrier-based attack aircraft. WEIGHTS: empty—\*; gross—approx. 49,500 lbs. POWERPLANTS: (2) General Electric J79-GE-2s; rating—approx. 15,000 lbs. st. each. PERFORMANCE: max. speed—approx. Mach 2.2. No other details available. MFR: North American Aviation, Inc., Columbus 16, O. \*Data classified.

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### BEECH MS 760 PARIS

TYPE: 4-place, twin-engine executive jet aircraft. WEIGHTS: empty—4,280 lbs.; gross—7,725 lbs. POWERPLANTS: (2) Turbomeca Marboro 2Cs; max. rating—883 lbs. st. each. PERFORMANCE: max. speed—403 mph; cruise speed—356 mph; initial rate of climb—2,263 fpm; range—920 mi.; takeoff distance over 50 ft.—3,400 ft.; landing distance over 50 ft.—3,050 ft. MFR: Morane-Saulnier, Puteaux (Seine), France. (The MS 760 is assembled in the U.S. by Beech Aircraft Corp., Wichita, Kan. which also holds manufacturing rights.)

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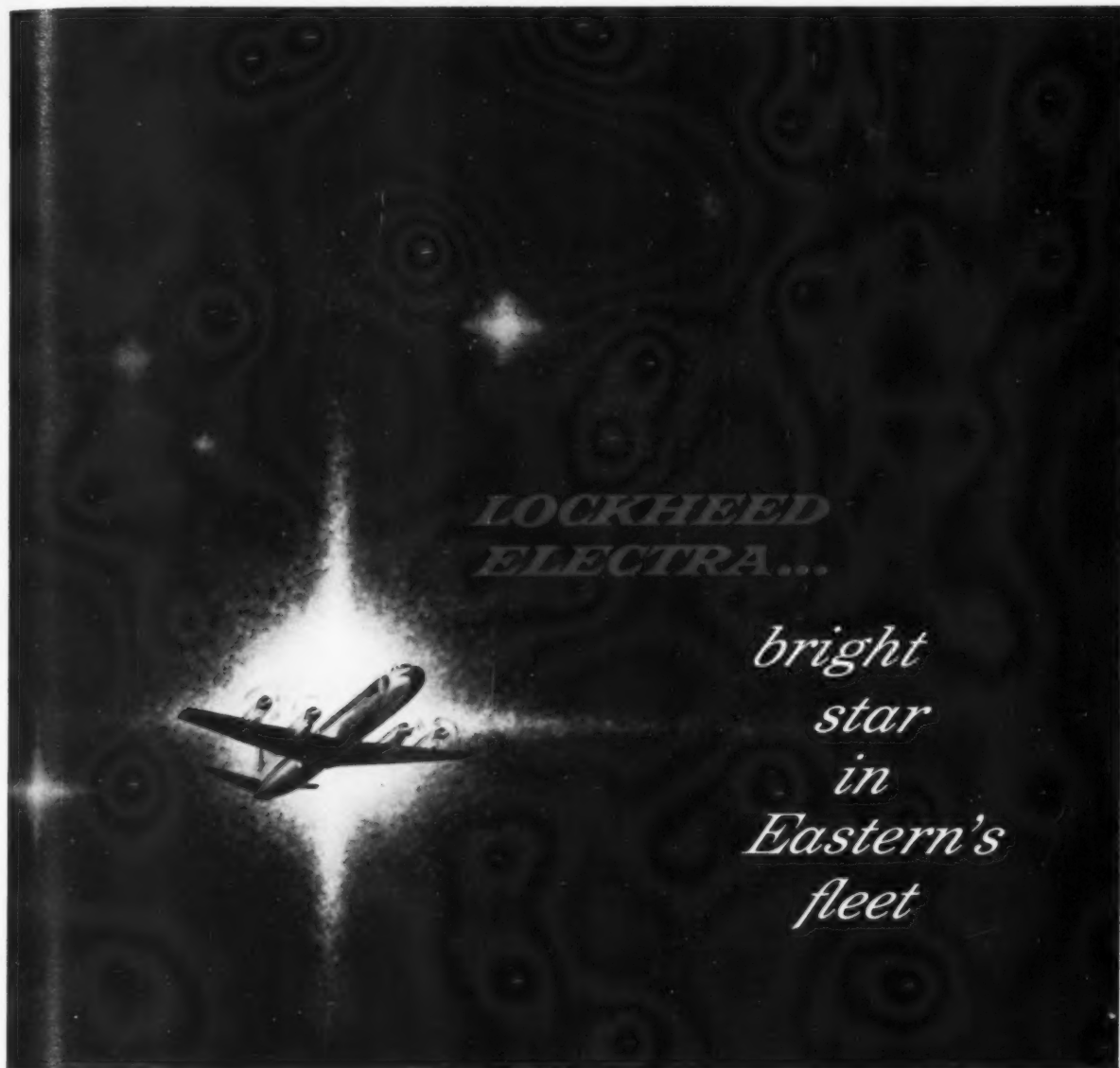
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